TOSHIBA

FILE NO. 043-200013

SERVICE MANUAL

COLOUR TELEVISION

S0SS Chassis

43D8UXM, 43D8UXR

- SUMMARY -

43D8UXM, 43D8UXR are the same as 43N9UXE except for the parts tabled on back of this sheet.
Use this service manual together with the original service manual 43N9UXE, 43N9UXH, 43N9UXM, 43N9UXA (File No. 040-9912).

PRINTED IN JAPAN, Oct., 2000 Ⓣ

REPLACEMENT PARTS LIST DIFFERENCES

Location No.	Part No.	Description
A201	23540222	Front Panel
A202	23450218	Control Panel
A203	23540220	Front Cover
A204	23527151	Speaker Grille R
A205	23527153	Speaker Grille L
A221	23427861	Door
A222	23445434	Button, Power
A223	23445435	Button, Control
A701	23064369	Case (43D8UXM)
A701	23064337	Case (43D8UXR)
C343	24591334	PF, 0.33μF
C403	24828683	PF, 0.068μF, 200V
D360	23316666	Diode, Zener, MTZJ4.7B
K501	23430845	Lenti Sheet, SCREEN43KKAL
K502	23430846	Fresnel Sheet, SCREEN43KKAF
K902	23306286	Remote Hand Unit, CT-9968 (43D8UXM)
P801	23372010	Power Cord (43D8UXM)
P801	23372053	Power Cord (43D8UXR)
QA01	23000643	IC, 87CS38N (43D8UXR)
R360	24366152	CF, 1500 ohm
R367	24366393	CF, 39k ohm
R368	24366333	CF, 33k ohm
R369	24366392	CF, 3900 ohm
R399	24366472	CF, 4700 ohm
* U401		DEF Board, PB9682
* U901		Signal Board, PB9848 (43D8UXR)
V901R	23005714	Protector Coupling, 43R
V902G	23005715	Protector Coupling, 43G
V903B	23005716	Protector Coupling, 43B
Y101A	23563991	Owner's Manual, English, 43D8UXM/43D8UXR
Y101B	23563993	Owner's Manual, Arabic, 43D8UXM
Y101B	23563994	Owner's Manual, Russian, 43D8UXR
Y108	23122780	AC Adaptor, 2P(43D8UXM)
Z450	24082996	CR Block, TPA5007BH

TOSHIBA CORPORATION
1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001, JAPAN

TOSHIBA

FILE NO. 040-9912

SERVICE MANUAL

COLOUR TELEVISION

S9SS Chassis

43N9UXE, 43N9UXH
43N9UXM, 43N9UXA

PRINTED IN JAPAN Oct., 1999 (So)

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CHAPTER 1 GENERAL ADJUSTMENTS

SAFETY INSTRUCTIONS

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" INSTRUCTIONS BELOW.

X-RAY RADIATION PRECAUTION

1. Excessive high voltage can produce potentially hazardous X-RAY RADIATION. To avoid such hazards, the high voltage must not be above the specified limit. The nominal value of the high voltage of this receiver is (A) kV at zero beam current (minimum brightness) under a (C) V AC power source. The high voltage must not, under any circumstances, exceed (B) kV.

   Refer to table-1 for high voltage (A), (B) & AC voltage (C). (See SETTING & ADJUSTING DATA on page 27)

   Each time a receiver requires servicing, the high voltage should be checked following the HIGH VOLTAGE CHECK procedure in this manual. It is recommended that the reading of the high voltage be recorded as a part of the service record. It is important to use an accurate and reliable high voltage meter.
2. The only source of X-RAY RADIATION in this TV receiver is the picture tube. For continued X-RAY RADIATION protection, the replacement tube must be exactly the same type tube as specified in the parts list.
3. Some part in this receiver have special safety-related characteristics for X-RAY RADIATION protection. For continued safety, parts replacement should be undertaken only after referring to the PRODUCT SAFETY NOTICE below.

SAFETY PRECAUTION

WARNING : Service should not be attempted by anyone unfamiliar with the necessary precautions on this receiver. The following are the necessary precautions to be observed before servicing this chassis.

1. An isolation transformer should be connected in the power line between the receiver and the AC line before any service is performed on the receiver.
2. Always discharge the picture tube anode to the CRT conductive coating before handling the picture tube. The picture tube is highly evacuated and if broken, glass fragments will be violently expelled. Use shatter proof goggles and keep picture tube away from the unprotected body while handling.
3. When replacing a chassis in the cabinet, always be certain that all the protective devices are put back in place, such as; non-metallic control knobs, insulating covers, shields, isolation resistor-capacitor network etc.

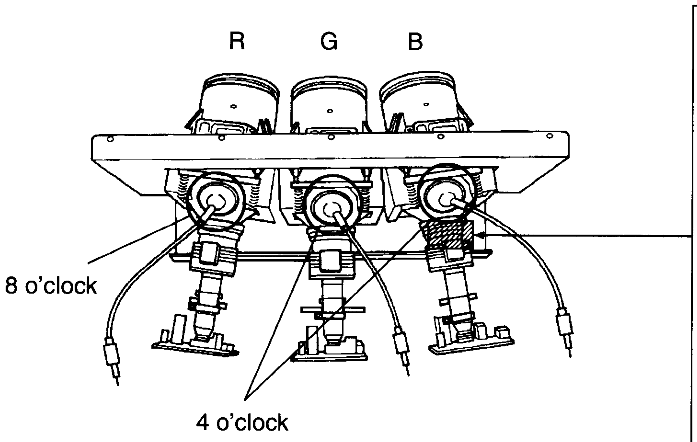
PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the international hazard symbols on the schematic diagram and the parts list.

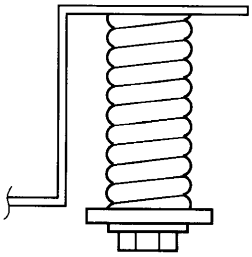
Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire, X-ray radiation or other hazards.

CRT ASSEMBLY REPLACEMENT AND MOUNTING

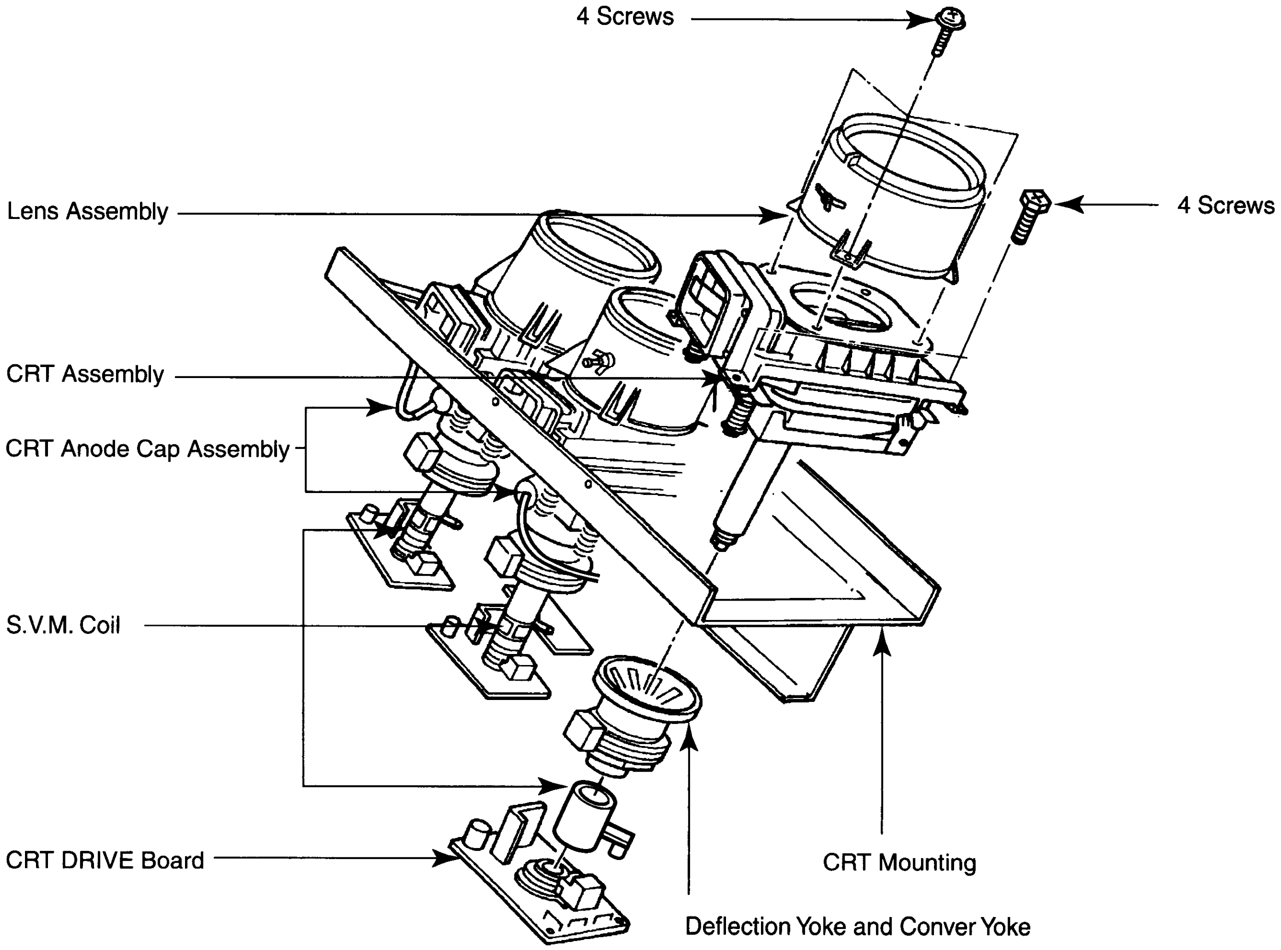
CAUTION : DO NOT LOOSEN THE HEX HEAD BOLTS WITH SPRINGS (12 PCS), BECAUSE THOSE ARE FOR SEALING OF CRT COOLANT.


R
G
B
8 o'clock
4 o'clock

Attention Serviceman



The Hex Head Bolts with Springs. (see sketch) used on CRT assembly, are "NOT" Adjustment Screws DO NOT LOOSEN-FLUID LEAKAGE WILL OCCUR.


4 Screws
Lens Assembly
4 Screws
CRT Assembly
CRT Anode Cap Assembly
S.V.M. Coil
CRT DRIVE Board
CRT Mounting
Deflection Yoke and Conver Yoke

Lens and Neck Components View

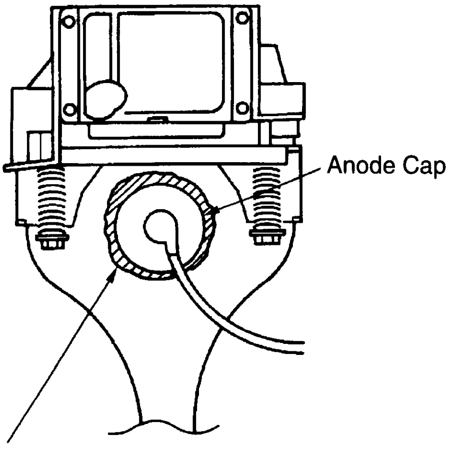
TO REMOVE CRT (Same procedure for R, G, B)

1. Remove CRT DRIVE Board, S. V. M. COIL and DEF. YOKE from CRT.
2. Remove Lens Assembly.
3. Detach CRT Anode Cap from CRT.
4. Remove CRT Assembly from CRT Mounting.

CRT REPLACEMENT (Same procedure for R, G, B)
Reverse the removal procedures except the followings.

1. Anode Cable should be replaced with new one. See "SERVICING PRECAUTIONS" shown below.
2. Install silicon (T461B) to the CRT, replace the Anode cable and put enough silicon again on around the Anode Cap as illustrated.

CAUTION: Align the Anode cable as illustrated on page 4.

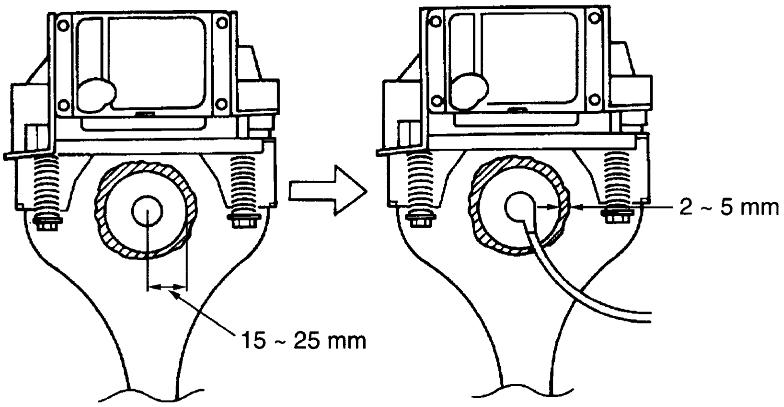


(On shaded area)
TSE3843W #23960136

ADJUSTING PROCEDURE IN REPLACING CRT

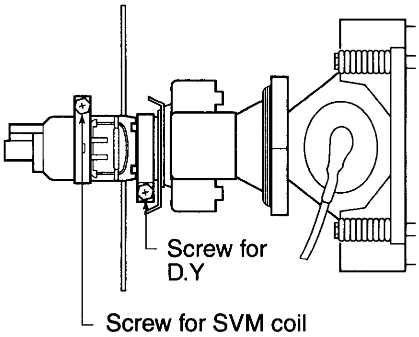
1. R.G.B. CUTOFF (SCREEN VR) ADJUSTMENT (page 6.)
2. R.G.B. FOCUS ADJUSTMENT (page 6.)
3. PICTURE TILT ADJUSTMENT (page 7.)
4. USER CONVERGENCE CENTER CHECK (Refer to owner's manual.)
5. CENTERING ADJUSTMENT (page 7.)
6. CONVERGENCE ADJUSTMENT (page 20.)
7. WHITE BALANCE ADJUSTMENT (page 14.)

Adjustments are complete.



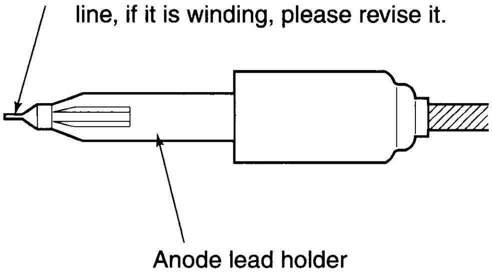
SERVICING PRECAUTIONS

- Do not use a magnetized screw driver for screws of Deflection Yoke and Velocity Modulation Coil to avoid magnetization of electron gun. Magnetization of electron gun will degrade basic function and result in unbalance of right and left shift of user static convergence, and result in no variable quantity.



- When replacing the anode cap assembly (CRT) or anode lead assembly (F.B.T.), remove the anode lead holder from old one and attach the holder again to new anode lead.

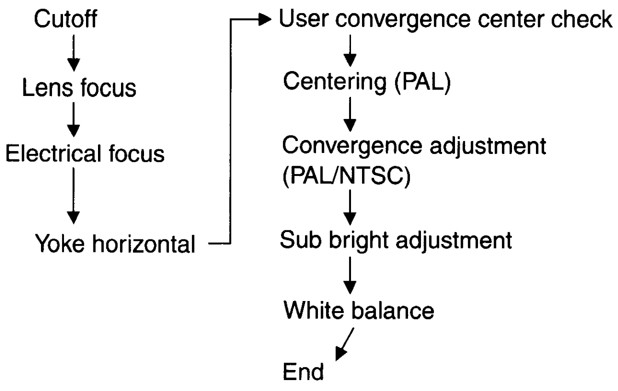
- Check the point of anode lead in a straight line, if it is winding, please revise it.



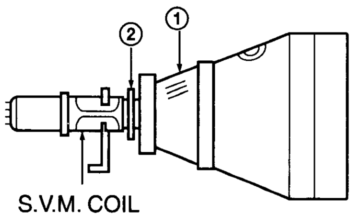
WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 3 OF THIS MANUAL.

PICTURE TUBE COMPONENTS ADJUSTMENT

ADJUSTING PROCEDURE IN REPLACING CRT



DESCRIPTION OF NECK COMPONENTS



① Deflection yoke and convergence yoke.
The position on the neck is required most front (CRT funnel side) and the screw is fastened after rotating yoke adjusting picture tilt.

② Centering magnet
After adjusting picture tilt, picture position is finally fixed by this magnet.
In order to get maximum margin of user convergence control for center of screen, this magnet have to be used for center convergence adjustment.

PREPARATION
Operate the receiver for at least 5 minutes.

R, G, B CUTOFF (SCREEN VR) ADJUSTMENT

1. Adjust before replace the screen assembly.
2. Set user control to reset position.
   (CONTRAST → Max
   BRIGHTNESS, COLOR, TINT → Center.)
3. Call up the adjustment mode display, then select the item RCUT.
4. Adjust the data of items **RCUT**, **GCUT**, and **BCUT** to "40H".
5. Press the -⊙ button on PJTV. (Y-MUTE : ON)
6. Gradually rotate R, G and B screen volume of FOCUS PAC clockwise or counterclockwise until the raster appears slightly on the CRT through the each lens, and leave them.
   (Lookin to the lens in order to check the raster.)
7. Press the -⊙ button on PJTV. (Return to Normal Picture)

RGB FOCUS ADJUSTMENT

1. Call-up the adjustment mode (see page 10)
2. Press -⊙ button on the remote controller in order to display the internally-generated white cross-hatch (or white cross-dot). (White cross-hatch or white cross-dot on a black background. See TEST SIGNAL SELECTION on page 11.)
3. Expose only RED by covering the GREEN and BLUE lenses with caps.
4. Loosen the RED lens fixing screws (refer to Fig. a), and adjust the RED lens focus to obtain the sharpest point while observing the middle and peripheral sections of the screen.

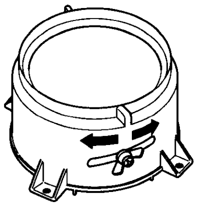


Fig. a

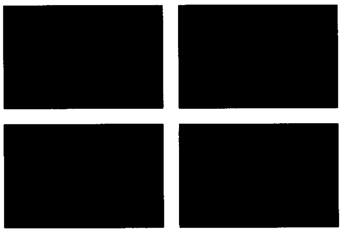
5. Use the focus VR of "R" of the focus pack in order to adjust the electric focus in the middle and peripheral sections of the screen to its sharpest level.
6. Check the RED focus of the whole screen and if necessary repeat steps 4 and 5.
7. Fix the RED lens by tightening its fixing screws.
8. Expose only GREEN by covering the RED and BLUE lenses with caps.
9. Display the internally-generated white cross-hatch (or white cross-dot) signal.
10. Adjust the GREEN lens focus on the left border of the screen to its sharpest level, then check the focus on the right border, and if it is at its sharpest level, fix it in that position by tightening the lens screws.

    (1) If the horizontal line toward the right border is red-flared, turn the lens screw slightly right in order to balance it with the left border. (After adjustment, the left border tends to be slightly green-flared, and the right border tends to be slightly red-flared.)
    (2) If the horizontal line toward the right border is green-flared, turn the lens screw slightly left in order to balance it with the left border. (After adjustment, the left border tends to be slightly red-flared, and the right border tends to be slightly green-flared.)

Note: The aim of the above-described adjustment procedure for the Green lens focus is to obtain the best lens focus after 2 - 3 hours of warming up taking into account the focus drift; it applies if the warming up time before the adjustment is less than 30 minutes. (The horizontal line in the screen middle section tends to be slightly red-flared.)

In case of warming up of more than 2 hours under a condition that the large anode current is running through the projection tube so that for example the all-white pattern appears, adjust to obtain the sharpest focus while observing the whole screen like in the RED case.

11. Press -⊖ button on the remote controller in order to display the internally-generated white crossbar. (White crossbar on a black background. See TEST SIGNAL SELECTION on page 11.)



12. Use the focus VR of "G" of the focus pack in order to adjust the electric focus in the middle section of the screen to its sharpest level.

Note: Normally the most clearly visible point of the scanning line is the sharpest point of the Green focus, however as the characteristics vary depending on the projection tube, the sharpest focus points of the vertical and horizontal lines may not match each other, thus when you turn the focus VR, if the picture tends to be tremendously unstable (rolls horizontally or vertically), adjust the balance of the vertical and horizontal lines to its best position.

13. Check the GREEN focus of the whole screen and if necessary repeat steps 10 and 11.
14. Fix the GREEN lens by tightening up its fixing screws.
15. Expose only BLUE by covering the RED and GREEN lenses with caps.
16. Press -⊖ button on the remote controller in order to display the internally-generated white cross-hatch (or white cross-dot). (White cross-hatch or white cross-dot on a black background. See TEST SIGNAL SELECTION on page 11.)
17. Loosen the BLUE lens fixing screws (refer to Fig. a), and adjust the BLUE lens focus while observing the middle and peripheral screen sections.
18. Press -⊖ button on the remote controller in order to display the internally-generated black cross-hatch (or black cross-dot). (Black cross-hatch or black cross-dot on a white background. See TEST SIGNAL SELECTION on page 11.)
19. Use the focus VR of "B" of the focus pack in order to adjust the focus in the middle section of the screen to its sharpest level.
    (The point of the Blue focus becomes sharpest when the brightness level of BLUE is lowest, while the cross-hatch is clearly visible.)

Note: Keep in mind that only the BLUE electric focus is adjusted with the black cross-hatch or black cross-dot.

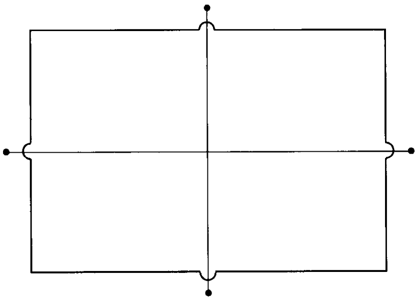
20. Check the BLUE focus of the whole screen and if necessary repeat steps 17 and 19.
21. Fix the BLUE lens by tightening its fixing screws.

TILT ADJUSTMENT

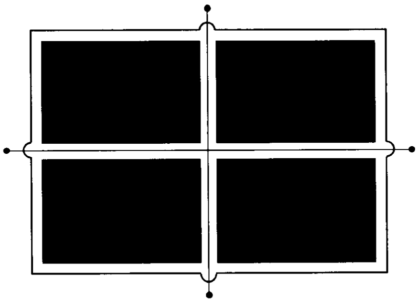
Rotate R, G, B deflection yoke so that picture becomes horizon, then fasten screw.

CENTERING ADJUSTMENT

1. Stretch a thread between two center slots of screen edge (top and bottom, left and right).



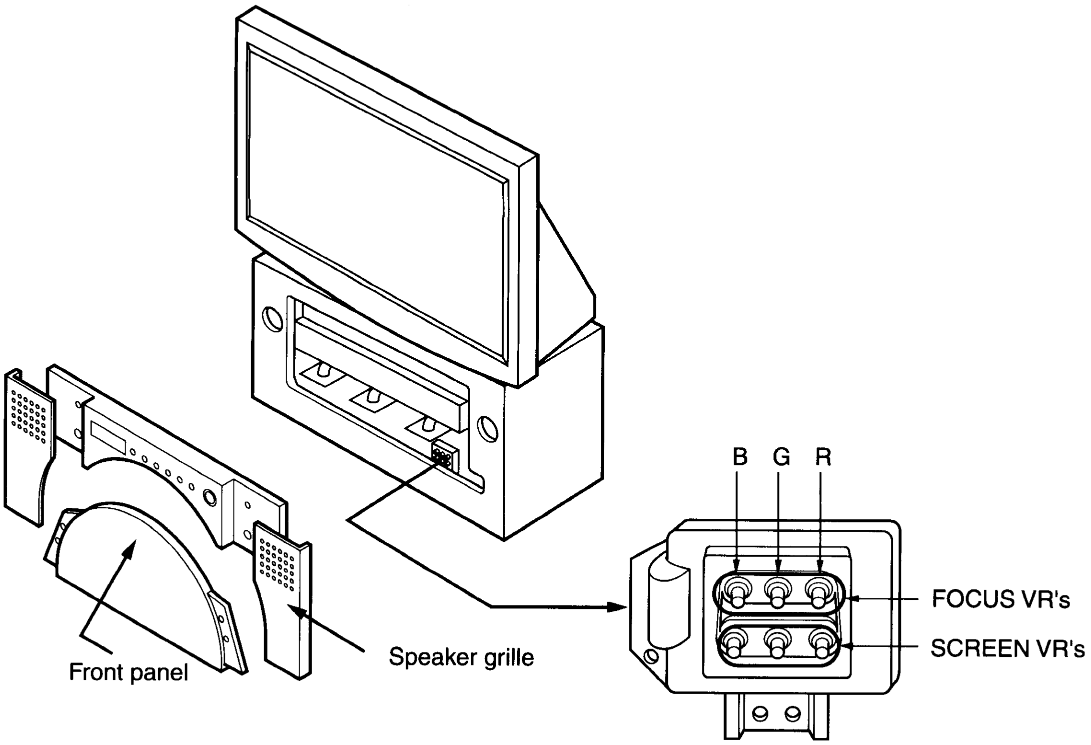
2. Select the adjustment mode. (See page 10.)
3. Press TV/VIDEO button on the Remote Control to display the white cross-bar.



4. Adjust G centering magnet so that the cross-bar pattern center comes to screen center.
5. Perform HEIGHT adjustment . (See page 14.)
6. Perform VERT. LINEARITY adjustment. (See page 14.)
7. Perform WIDTH adjustment. (See page 14.)
8. Check whole quality of green line.
9. Adjust R, B centering magnet so that the cross-bar pattern center comes to screen center.

LOCATION OF SCREEN AND FOCUS VR'S

To remove the Speaker grille and Front panel.


B G R
FOCUS VR's
SCREEN VR's
Front panel
Speaker grille

REPLACEMENT OF HIGH VOLTAGE CABLE

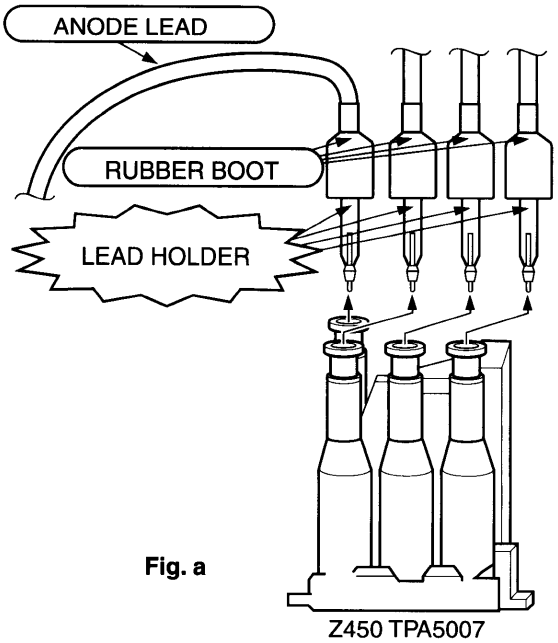
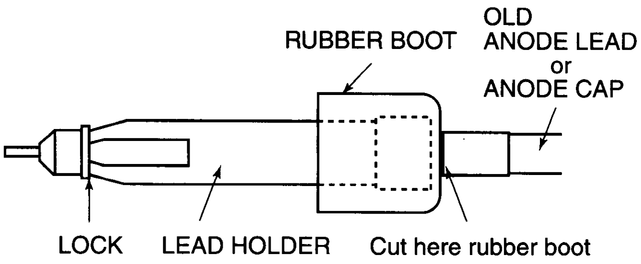

ANODE LEAD
RUBBER BOOT
LEAD HOLDER
Z450 TPA5007

Fig. a

1. When replacing Anode Lead or Anode Cap with new one, remove Lead Holder from old lead as shown in figure below, and put it on new lead. Do not throw away Lead Holder.

NOTE : THE LEAD HOLDER IS ATTACHED TO TPA5007 (Z450), BUT IS NOT ATTACHED TO ANODE LEAD AND ANODE CAP. RUBBER BOOT IS ATTACHED TO ANODE LEAD AND ANODE CAP.

2. Detaching Lead Holder


RUBBER BOOT
OLD
ANODE LEAD
or
ANODE CAP
LOCK
LEAD HOLDER

Cut here rubber boot and lead together to detach Lead Holder.

Fig. b

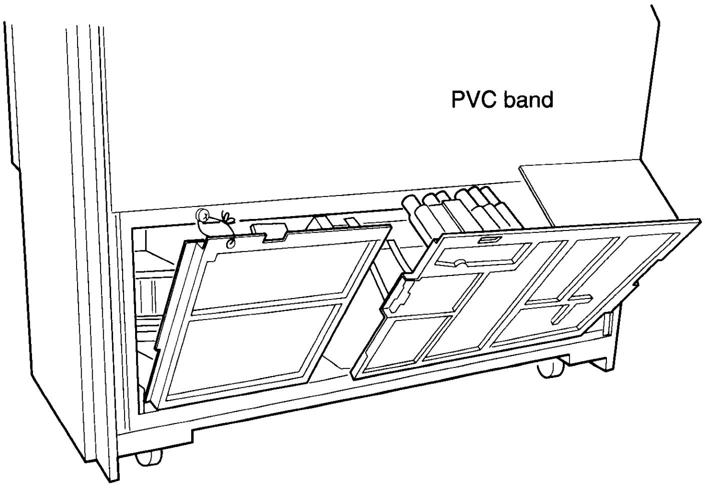
WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 3 OF THIS MANUAL.

SERVICE POSITION

In order to assure the performance, processed wires shall be replaced after the repair work.
Work procedures are as follows:

1. Remove the back board.
2. Remove lead wires.
3. Draw out the chassis.
4. Insert the front edge of the chassis into the groove where the back board has been inserted and make the chassis stand.
5. Put one screw on cabinet by depth of their length for fixing back board, and then, temporarily use them to hold the CONV/POWER chassis with wires tied to screws or insert the PVC band into the opening of main board frame to fix the main board.

After repair work finished, replace it in the opposite procedure.



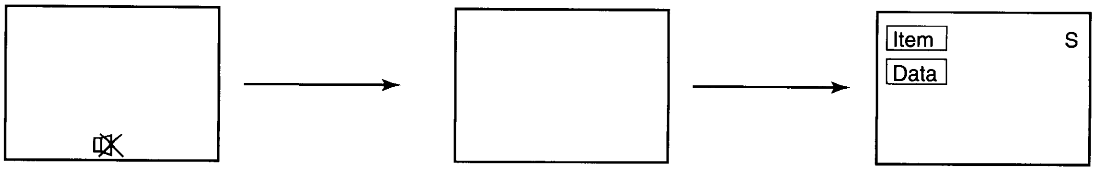
SERVICE MODE

1. ENTERING TO SERVICE MODE

1) Press 🔇 button once on Remote Control.

2) Press 🔇 button again to keep pressing.

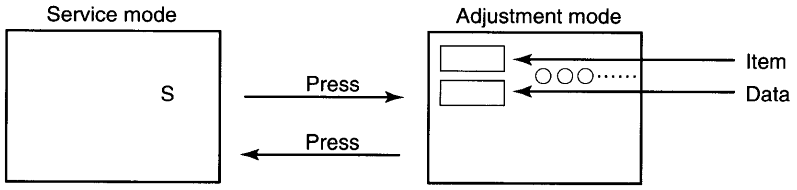
3) While pressing the 🔇 button, press MENU button on TV set.



(Service mode display)

2. DISPLAYING THE ADJUSTMENT MENU

1) Press MENU button on TV.



3. KEY FUNCTION IN THE SERVICE MODE

The following key entry during display of adjustment menu provides special functions.

Screen adjustment mode ON/OFF:	⊖ button (on TV)
Test signal selection :	⊖ button (on Remote)
Selection of the adjustment items :	Channel ▲/▼ (on TV or Remote)
Change of the data value :	Volume ◢ +/– (on TV or Remote)
Adjustment menu mode ON/OFF :	MENU button (on TV)
Initialization of the memory (QA02) :	CALL + Channel button on TV (▲)
Reset the count of operating protect circuit to "00":	CALL + Channel button on TV (▼)
"RCUT" selection :	1 button
"GCUT" selection :	2 button
"BCUT" selection :	3 button
"SCNT" selection :	4 button
"COLC" selection :	5 button- - - - Color thickness correction
"TNTC" selection :	6 button
Convergence adj :	⇥♪⇤ button
Test audio signal ON/OFF (1kHz) :	8 button
Self diagnostic display ON/OFF :	9 button

note: Displayed differently as shown below, depending on the setting of the receiving color system.
COLP (PAL)
COLC (NTSC)
COLS (SECAM)

CAUTION : Never try to perform initialization unless you have changed the memory IC.

4. SELECTING THE ADJUSTING ITEMS

1)Every pressing of CHANNEL ▲ button in the service mode changes the adjustment items in the order of table-2. (▼ button for reverse order)

Refer to table-2 for preset data of adjustment mode.
(See SETTING & ADJUSTING DATA on page 27)

5. ADJUSTING THE DATA

1) Pressing of VOLUME ⊿ +/– button will change the value of data in the range from 00H to FFH. The variable range depends on the adjusting item.

6. EXIT FROM SERVICE MODE

1) Pressing POWER button to turn off the TV once.

■ INITIALIZATION OF MEMORY DATA OF QA02

After replacing QA02, the following initialization is required.

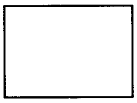
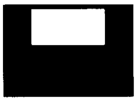
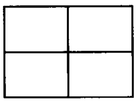
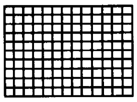
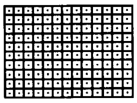
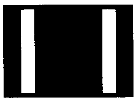
1. Enter the service mode, then select any register item.
2. Press and hold the CALL button on the Remote, then press the CHANNEL ▲ button on the TV. The initialization of QA02 has been complated.
3. Check the picture carefully. If necessary, adjust any adjustment item above. Perform "Auto search Memory" on the owner's manual.

CAUTION: Never attempt to initialize the data unless QA02 has been replaced.

7. TEST SIGNAL SELECTION

1) Every pressing of -⊙ button on the Remote Control changes the built-in test patterns on screen as described below in SERVICE MODE.

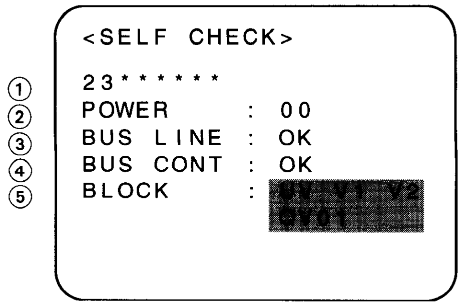
Signal off ——→ NTSC signals (14 patterns)
↑—— PAL signals (14 patterns) ←—┘

Signals	Picture
• Red raster • Green raster • Blue raster • All Black • All White	
• Black & White	
• Black cross-bar • White cross-bar • Black cross-bar on green raster	
• Black cross-hatch • White cross-hatch	
• Black cross-dot • White cross-dot	
• H signal (white) • H signal (black)	

* The signals marked with ▨ are not usable to display in the Test signal for some model.

8. SELF DIAGNOSTIC FUNCTION

1) Press “9” button on Remote Control during display of adjustment menu in the service mode.
The diagnosis will begin to check if interface among IC’s are executed properly.
2) During diagnosis, the following displays are shown.



```
    <SELF CHECK>

①   23******
②   POWER      :  00
③   BUS LINE   :  OK
④   BUS CONT   :  OK
⑤   BLOCK      :  UV  V1  V2
                  QV01
```

① Part number of microcomputer (QA01)

② Operation number of protecting circuit ----“00” is normal.
When indication is other than “00”, overcurrent apts to flow, and circuit parts may possibly be damaged.

③ BUS LINE CHECK ----“OK” is normal.
“SDA1-GND” ------------- SDA-GND short circuit.
“SCL1-GND” -------------- SCL-GND short circuit.
“SCL1-SDA1” ------------- SCL-SDA short circuit.

④ BUS CONT ----“OK” is normal.
When indication shows “Q ○○○ NG”, the device with the number may possibly be damaged.

⑤ BLOCK
UV : TV reception mode
V1 : VIDEO 1 input mode (-O1)
V2 : VIDEO 2 input mode (-O2)

Indicated color of mode now selected : Green and Red
Indicated color of other modes : White

Green : Normal
Red : The microcomputer operates to provide judgement of no video signal. The red color is still indicated though the signal is input, failure may exist in input signal line including QV01.
QV01 : In case of indication green ---Normal
In case of indication red with input signal----
Failure may exist in output line including QV01.

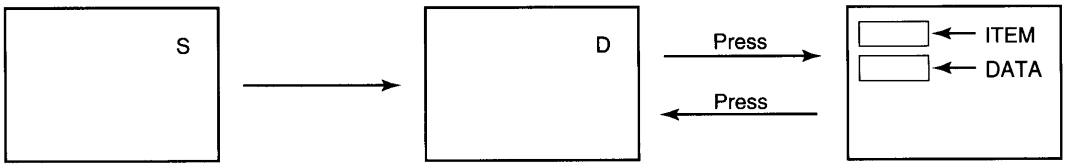
NOTE: Component which controls character display on screen is QT01 (TELETEXT IC). If the display function fails to operate due to damage in QT01, self diagnosis procedure is as follows.
(1) In case that power indicator is blinking with interval of 0.5 seconds, protecting circuit (Current [illegible] is operated) and circuit components may possibly be damaged. Check related components.
(2) In case that power indicator is blinking with interval of 1 seconds, Protecting circuit does not operate, but a part of bus line does not operate normally. Check Bus line.

* The items marked with ▨ are not usable to display in the SELF DIAGNOSTIC FUCTION for some model.

DESIGN MODE

1. ENTERING TO DESIGN MODE

1) Select the Service mode. 2) While pressing CALL button on Remote and press MENU button on TV. 3) Press MENU button on TV.



(Design mode) (Adjustment mode)

When QA02 is initialized, items "OPT0" and "OPT1" of DESIGN MODE are set to the data of the representative model of this chassis family.

Therefore, because ON-SCREEN specification remains in the state of the representative of model. This model is required to reset the data of items "OPT0" and "OPT1".

2. SELECTING THE ADJUSTING ITEMS

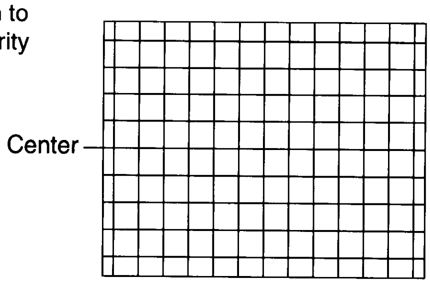
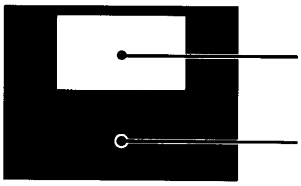
Every pressing of CHANNEL ▼ button in the design mode changes the adjustment items in the order of table-3. (▲ button for reverse order)

Refer to table-3 for data of design mode.
(See SETTING & ADJUSTING DATA on page 27)

3. ADJUSTING THE DATA

Pressing of VOLUME ▲ or ▼ button will change the value of data.

ELECTRICAL ADJUSTMENT

ITEM	ADJUSTMENT PROCEDURE
WIDTH (WID)	1. Call up the adjustment mode display, then select the item **WID**. 2. Press the VOLUME ▼ button to get the picture so the left or right edges of raster begins to lack. 3. Press the VOLUME ▲ button to advance the data by 10 steps. Note : Check the horizontal picture position is correct.
VERTICAL LINEARITY (VLIN)	1. Call up the adjustment mode display, then select the item **VLIN**. 2. Press the TV/VIDEO button on Remote until the cross-hatch pattern appears on the screen. 3. Press the VOLUME ▲ or ▼ button to obtain the picture of the best linearity 
HEIGHT (HIT)	1. Call up the adjustment mode display, then select the item **HIT**. 2. Press the VOLUME ▼ button to get the picture so the top or bottom of raster begins to lack. 3. Press the VOLUME ▲ button to advance the data by 11 steps. Note : Check the vertical picture position is correct.
WHITE BALANCE (RCUT) (GCUT) (BCUT) (RDRV) (BDRV)	Black and White pattern  High light area Adjust "RDRV" or "BDRV" to be white. Low light area Fine adjust "RCUT", "GCUT" or "BCUT" to be black. 1. Set user control to reset position. (CONTRAST → Max BRIGHTNESS, COLOR, TINT → Center.) 2. Call up the adjustment mode display, then select the item RCUT. 3. Adjust the data of items **RCUT**, **GCUT**, and **BCUT** to "40H". 4. Press the →⊙ button on PJTV. (Y-MUTE : ON) 5. Gradually rotate R, G and B screen volume of FOCUS PAC clockwise or counterclockwise until the raster appears slightly on the CRT through the each lens, and leave them. (Lookin to the lens in order to check the raster.) 6. Press the →⊙ button on PJTV. (Return to Normal Picture) 7. Press the →⊙ button on Remote, and select the Black and White pattern. 8. Adjust the data of items **RCUT**, **GCUT** and **BCUT** for proper white-balanced picture in low light area. 9. Adjust the data of items **RDRV** and **BDRV** for proper white-balanced picture in high light area. 10. Check the white balance in both low and high light areas. If necessary, perform again steps from 8 to 9.

Item	Name	Setting user control	Input signal	Measurement point	Adjustment method	Adjustment rating
SCNT	Sub-contrast	Dynamic mode	Sub-bright signal (J2 ch)	Q501#55 (TP501)	1) Adjust the amplitude from the pedestal level to the white peak.	3.1 ± 0.2 Vop
BRTC	Sub-brightness	Dynamic mode	Sub-bright signal (J2 ch)	Screen adjustment	1) Adjust the number of blacked out sub-bright signal lines. 2) Adjust after adjusting W/B and SCNT.	4 ± 1.5 lines
COLP	Sub-color PAL	Dynamic mode	Sub-bright signal (PAL)	Q501#55 (TP501)	1) Adjust the amplitude of the rainbow color bar (p-p value of the upper half). 2) Mute the video. Adjust after the COLC adjustment.	1.8 ± 0.2 Vop
BELL	BELL filter	Dynamic mode	SECAM color bar (E2 ch)	QQ01#21 (TPM01)	1) Use synchro to adjust BELL so that the waveform is flat. 2) Match to the white component.	100 ± 10 %
SRY	SECAM R-Y black level	Dynamic mode	SECAM color bar (E2 ch)	Q501#55 (TP501)	1) Adjust SRY so that the monochrome signal component matches the H.BLK level. 2) Adjust after the COLS and BELL adjustments.	0 ± 40 mV(p-p)
SBY	SECAM B-Y black level	Dynamic mode	SECAM color bar (E2 ch)	Q501#55 (TP501)	1) Adjust SBY so that the monochrome signal component matches the H.BLK level. 2) Adjust after the COLS and BELL adjustments.	0 ± 40 mV(p-p)
COLS	Sub-color SECAM	Dynamic mode	SECAM color bar (E2 ch)	Q501#55 (TP501)	1) Adjust the color bar amplitude (mute the video when adjusting). 2) Adjust the p-p value of the upper half.	1.8 ± 0.2 Vop
COLC	Sub-color NTSC	Dynamic mode	Sub-bright signal (J2 ch)	Q501#55 (TP501)	1) Adjust the amplitude of the rainbow color bar (p-p value of the upper half). 2) Mute the video. 3) Adjust after the SCNT adjustment.	1.8 ± 0.2 Vop
Screen adjustment	Screen	Factory screen adjustment mode		CRT screen	1) Make the periphery extremely dark. 2) Set the factory screen adjustment mode (Y mute, DRV.CUT.=40H). 3) Measure the CRT screen directly and adjust the screen VR to the point where the light starts. 4) Make the above adjustment for the R, G and B tubes.	The point where the light starts.

Item	Name	Setting user control	Input signal	Measurement point	Adjustment method	Adjustment rating
Focus adjustment	Focus	Dynamic mode	RETMA	Screen adjustment	1) Adjust the electrical focus and optical focus repeatedly to obtain the best focus. 2) During adjustment, use a jig to block the other CRTs. 3) Make the above adjustment for the R, G and B tubes. Refer to the adjustment method in this text for details.	
RDRV/ BDRV	Bright W/B			Screen adjustment	1) Adjust the color temperature of the bright part (103 cd/m^2).	11500k + 0.0075duV
RCUT/ BCUT	Dark W/B			Screen adjustment	1) Adjust the color temperature of the dark part (17 cd/m^2).	10500k + 0.0105duV
High-voltage adjustment	High voltage	Dynamic mode	Phillips pattern (PAL)	Between T461 and Z450	1) Connect a high-voltage meter between T461 and Z450 and adjust the high voltagewith R450 (user adjustment standard).	30.7 ± 0.2 kV
Screen position adjustment		Dynamic mode	Phillips pattern (PAL)	Screen adjustment set: facing east	1) Adjust the centering magnets so that the screen is positioned in the center of the dummy screen (cross).	
HIT VLIN	Vertical amplitude adjustment	Dynamic mode	Phillips pattern (PAL)	Screen adjustment set: facing east	1) Use HIT data to reduce the vertical amplitude until the up and down flags first appear on the screen. 2) Next, use HIT to increase the vertical amplitude until either the up or down flag is aligned with the edge of the screen (align the vertical center of the pattern with the screen center mark).	
WID (43")	Horizontal amplitude adjustment	Dynamic mode	Phillips pattern (PAL)	Screen adjustment set: facing east	1) First, lower the WID data to reduce the amplitude until the flags are completely visible on the left and right sides. 2) Next, use the WID data to increase the horizontal amplitude until the edge of either the left or right Phillips pattern flag is aligned with the edge of the screen.	

Item	Name	Setting user control	Input signal	Measurement point	Adjustment method	Adjustment rating
STRP	Convergence pattern horizontal phase adjustment	Dynamic mode	Phillips pattern (PAL)	Screen adjustment set: facing east	Align the centers of the RETMA pattern and Convergence pattern (adjust the vertical phase only).	
NTRP	Convergence pattern horizontal phase adjustment	Dynamic mode	Phillips pattern (NTSC)	Screen adjustment set: facing east	Align the centers of the RETMA pattern and RETMA pattern (adjust the horizontal phase only).	

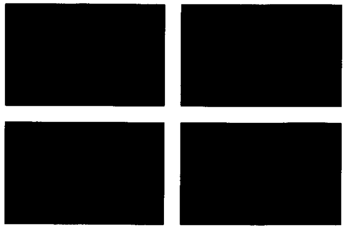
Sub-screen Adjustment Procedure (PIP)

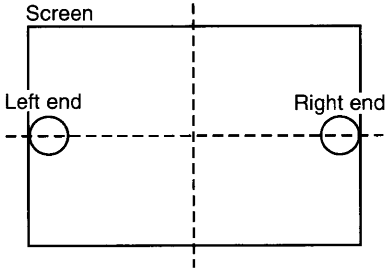
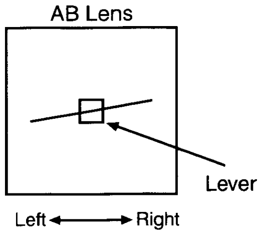
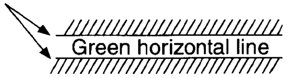
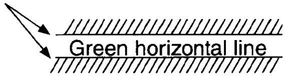
[Data adjustment]

1. Sub-screen sub-bright adjustment
   Conditions: Adjust after the main screen adjustment.
   Adjustment: (1) Display the in-company signal on Japanese channel 2 on both the main and sub screens.
   (2) Select adjustment item PYOF and adjust the number of blacked out lines to 5 ± 1.5 lines.

<Reference Data>

2. Sub-screen color differential DC offset adjustment
   Conditions: Adjust after the sub-screen sub-bright adjustment.
   Adjustment: (1) Display all black signals on both the main and sub screens.
   (2) Observe PPO1 #12 (Rout).
   (3) Select adjustment item PIOF and adjust the DC offset to 0 ± 10mV.
   (4) Observe PPO1 #10 (Bout).
   (5) Select adjustment item PQOF and adjust the DC offset to 0 ± 10mV.

No.	Adjustment Items	Adjustment Methods
1.	Focus adjustment	(Conditions) - Signal : Retoma pattern (NTSC),built-in cross pattern, dot cross, non-interlace all white signal (43-inch blue electric focus made by DLTV) - User adjustment : Dynamic mode
1-1	Electric focus	(Adjustment) 1. Common items 1) Make rough adjustment on the lens focus of each R, G, and B tubes as well as electric focus in advance. 2) Receive the image of Retoma pattern, and adjust each R, G, and B tube to positions by turning the focus volume of the focus block (Z410) so that the screen center comes to optimum focus. 3) Bring up the cross pattern built in by factory adjustment mode and turn to green monochrome with the lens cap. (See the figure below) 4) Adjust green electric focus so that the green horizontal lines of raster can be observed most clearly. 5) When flare appears on vertical and horizontal lines due to unsatisfactory green alignment (Note 1), turn the focus VR clockwise up to the position immediately before the flare gets minimized. (Note 1) The word “alignment” means the assembly accuracy of an electron gun. In case the alignment is poor, the screen wavers greatly when the focus VR is turned, and there are occasions where the horizontal and vertical optimum focus points do not meet. Be careful. (Note 2) Adjust only green color for the above-mentioned items (3)~(5).  A white cross on the black background 2. Adjustment of DLTV-made 43-inch blue electric focus (only 43N9UXC) 6) Input the non-interlace all white signal and turn it to blue mono chrome with the lens cap. 7) Adjust blue electric focus so that the raster at the screen center can stand out most clearly (a point where brightness is minimized). Here is a tip for stopping the focus VR at this time. That is, after you found the best point, rotate the VR in the clockwise direction once, then turn it counterclockwise and stop it at the best point.
1-2	Lens focus (43N9U Series)	• Lens Focus Adjustment Method of 43N9U Series 1) Receive the image of Retoma pattern, and adjust the lens of R and B tubes respectively to the positions so that the screen center comes to optimum focus. (Use the lens cap and shut out all the colors except the ones to be adjusted.) Adjust the Green lens focus according to the procedures detailed in the next page.

No.	Adjustment Items	Adjustment Methods
1-3	Green lens focus (43N9U Series)  	• 43N9U Series/Adjustment Methods for Green Lens Focus 1) Receive the dot cross pattern and turn it to green monochrome with the lens cap. 2) Watch the horizontal line of both the right and left ends on the horizontal axis of the screen, adjust the green lens focus as best as you can, and check that the focus balance is not bad. Check is carried out as follows. (1) Adjust the green lens focus best with the left-end dot or cross hatch. The word "best" definesa state where the scanning lines appears most clearly and there is the leastexistence of red flare and green flare above and below the horizontal line of dot or cross hatch. (*1) (2) Next, check the right-end focus and check what colors of flare appear above or below the horizontal line of dot or crosshatch. (If the status of this flare is the same as the one on the left side, it is in the optimum condition) 3) In case the tendency of the right and left flare is different, see (*1) as mentioned below, divide it, and adjust it to a grade in the middle. 4) Check out the dots at 4 corners onthe screen, and confirm that the focus grade (including flare) lies within a tolerable level. (*1 mark) When you adjust the lens focus while watching the dot and crosshatch on the screen, you will notice that the look of raster changes. At the same time, green flare and red flare emerge above and below the horizontal line.The point where the flare gets minimized and the raster looks best becomes the best point of focus. •Tendency of Flare By Lever Position of ABLens  Shifting direction of lens adjusting lever Shift toward left : Red flare appears top and bottom  Shift toward right : Green flare appears top and bottom  Middle : Point where flare gets minimized (Note 3) We make a preliminary adjustment here since it takes some time until the lens focus gets stabilized.
1-4	Lens Focus (50N9U Series) (61N9U Series)	Receive the image of Retoma pattern, and adjust each R, G, and B tubes to positions so that the screen center comes to optimum focus. (Use the lens cap to shut out the colors except the ones to be adjusted.) (Note 4) We make a preliminary adjustment here since it takes some time until the lens focus gets stabilized.

CONVERGENCE ADJUSTMENT

1. PICTURE ADJUSTMENT

The adjustment are done on two screens; 50 Hz mode (PAL) and 60 Hz mode (NTSC). To synchronize correction wave to each frequency, receive the suitable signal.

1-1. Change of Memory (E^{2}PROM)

Memory of Q713 E^{2}PROM is nonvolatile, and adjusted data is stored. Since data in RAM of Q701 is eliminated with power OFF, the RAM is set by soft command of microcomputer QA01 at every power ON. The adjusted data which is obtained from screen-watching is once stored in RAM inside QA01. The whole data in RAM which is corrected on each adjusting point and is changed, is saved into E^{2}PROM (Q713) as a fixed data. The data capacity per one screen requires 8k for 50 Hz mode (PAL), and 4k for 60 Hz mode (NTSC).

1-2. Service Mode

1-2-1. Outline

Service mode is controlled by software of microcomputer QA01, and is one of function of set.

This mode is designed so that ordinary user cannot use this, and special operation is required to use this.

Data change is done by direct shift (cursor display) of adjusting points; 50 Hz mode (PAL) 8 x 8/1 color and 60 Hz mode (NTSC) 8 x 8/1 color.

1-2-2. To Enter and to Exit

Press MUTE key on remote hand unit twice and keep pressing the key, press MENU key of set console.

Then service data will be displayed on top left of screen. Under the condition, press " →|♪|← " key on remote hand unit, and the screen shows crosshatch picture (Later, the first picture). Press again " →|♪|← " key, and the screen changes to crosshatch + data display (Later, second picture). This time changed data are automatically saved

Further, press " →|♪|← " key on remote, the screen returns to original picture.

🔇 + 🔇 MENU

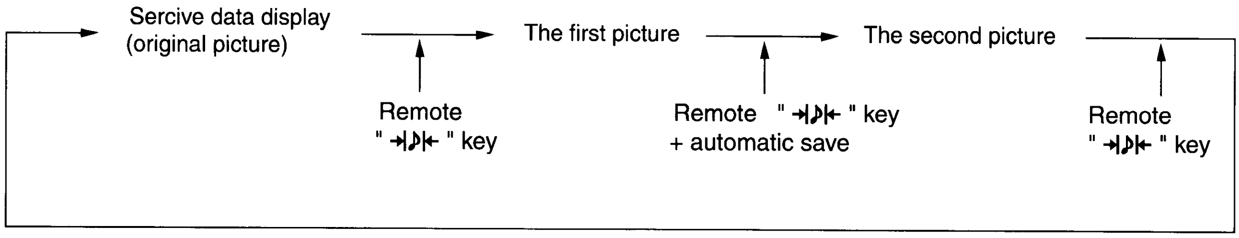
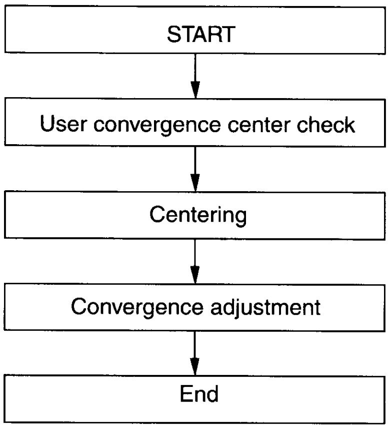
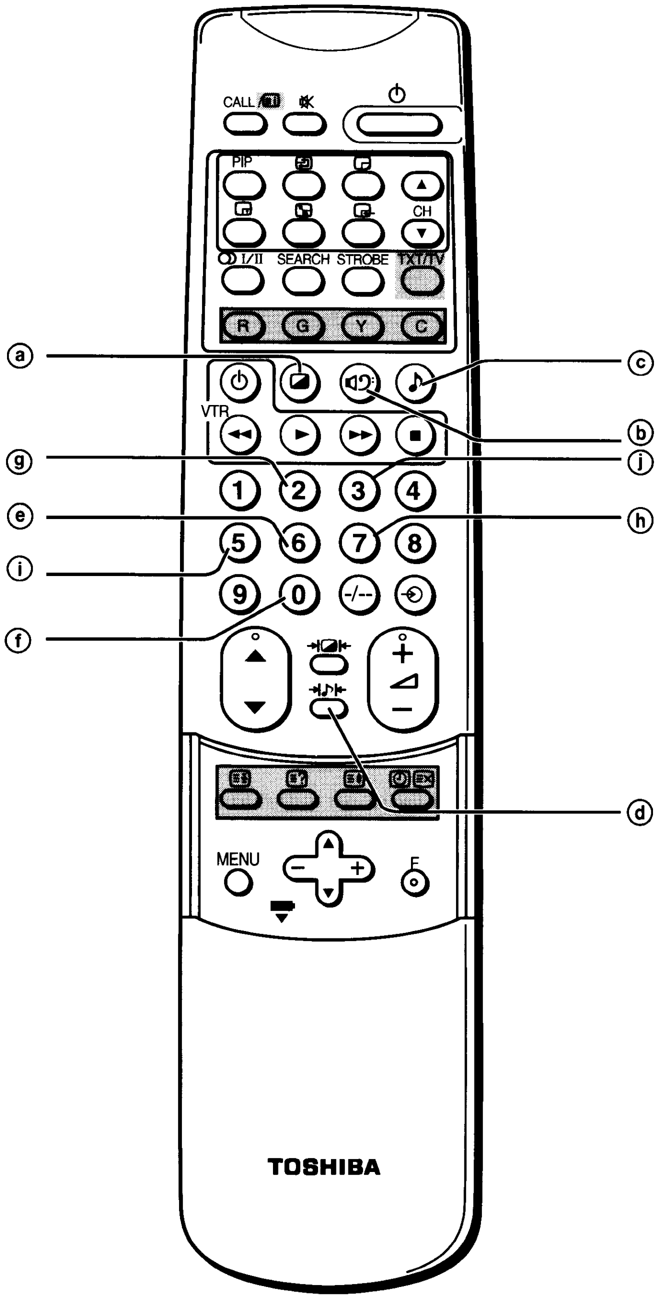

Sercive data display
(original picture)
The first picture
The second picture
Remote
" →|♪|← " key
Remote " →|♪|← " key
+ automatic save
Remote
" →|♪|← " key

Fig. 10 -1

Adjusting Procedure In Replacing Convergence Unit/Main Def


START
User convergence center check
Centering
Convergence adjustment
End

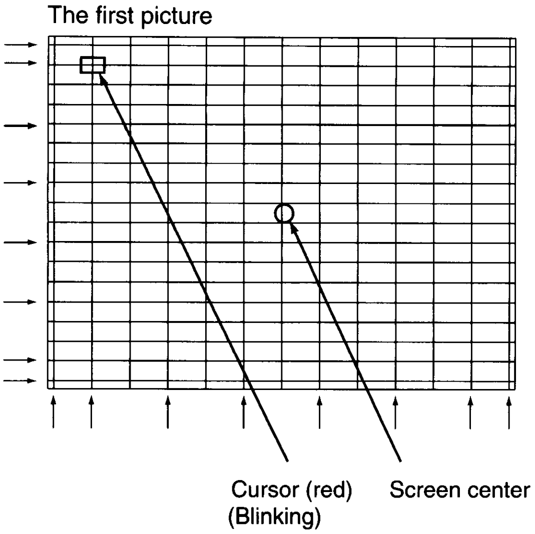
2. KEY FUNCTION OF REMOTE CONTROL UNIT

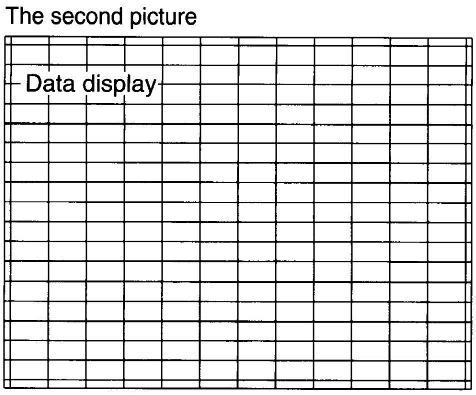

CALL
PIP
CH
I/II
SEARCH
STROBE
TXT/TV
R
G
Y
C
VTR
1
2
3
4
5
6
7
8
9
0
-/--
MENU
F
TOSHIBA
ⓐ
ⓖ
ⓔ
ⓘ
ⓕ
ⓒ
ⓑ
ⓙ
ⓗ
ⓓ

ⓐ	◪ key	Red test pattern ON/OFF
ⓑ	🔊 key	Green test pattern ON/OFF
ⓒ	♪ key	Blue test pattern ON/OFF
ⓓ	→|♪|← key	Mode picture change-over
ⓔ	6 key	Cursor shift / data change mode change-over
ⓕ	0 key	Cursor down / adjusting point down
ⓖ	2 key	Cursor up / adjusting point up
ⓗ	7 key	Cursor right / adjusting point right
ⓘ	5 key	Cursor left / adjusting point left
ⓙ	3 key	Cursor color change

3. Picture

a) 50 Hz mode (PAL) .... Correcting point: Horizontal 8 x Vertical 8 (Arrow marks denote correcting point)





The first picture

Crosshatch pattern. Pattern colors are three color display. Cursor is blinking in red. When changed, condition is last memory state.

Cursor is .... Data change mode in lighting,
Cursor shifting mode in blinking.

Display color shows the color that data change is possible.

The second picture

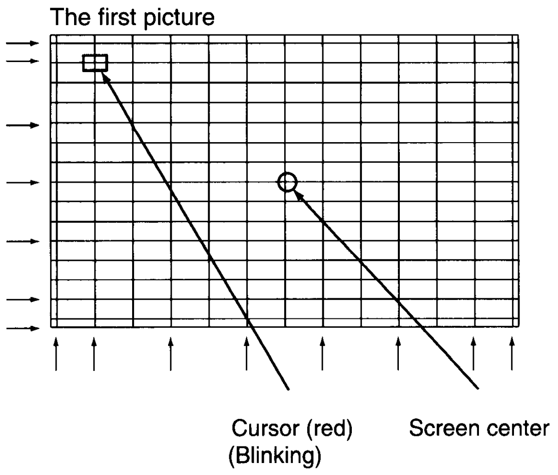
When entering from the first picture to the second picture, correcting wave of convergence is muted for one second.
During this period, the changed data is transferred from RAM Q701 to E2PROM Q713, and saved.

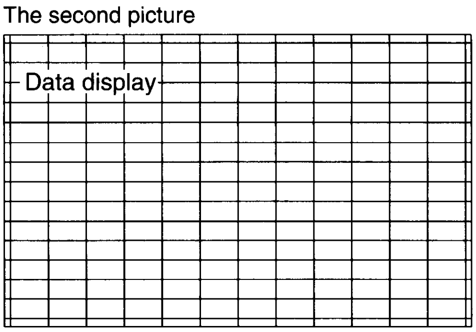
The second picture is indicated with data on top left of the first picture, therefore, convergence cannot be adjusted by this picture.

Caution:

- Receive suitable signal for adjustment. Centering of green picture can be done in 50 Hz mode (PAL).
- Centering of 60 Hz mode (NTSC) can be adjusted by convergence adjustment. Besides, decide the center by cross pattern of static convergence in menu, and adjust convergence from center to circumference.

b) 60 Hz mode (NTSC) .... Correcting point: Horizontal 8 x Vertical 7 (Arrow marks denote correcting point)





The first picture

Crosshatch pattern. Pattern colors are three color display. Cursor is blinking in red. When changed, condition is last memory state.

Cursor is .... Data change mode in lighting,
Cursor shifting mode in blinking.

Display color shows the color that data change is possible.

The second picture

When entering from the first picture to the second picture, correcting wave of convergence is muted for one second.

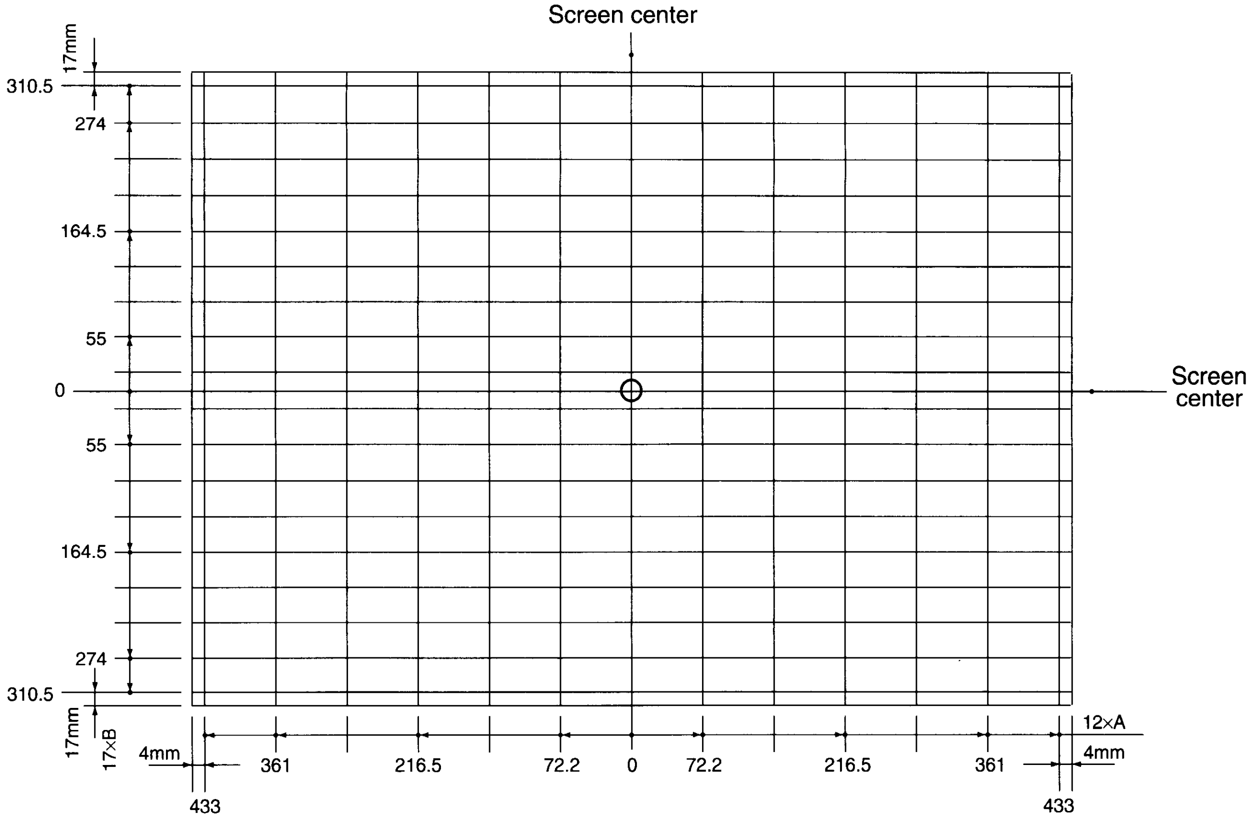
During this period, the changed data is transferred from RAM Q701 to E^{2}PROM Q713, and saved.
The second picture is indicated with data on top left of the first picture, therefore, convergence cannot be adjusted by this picture.

Caution:

- Receive suitable signal for adjustment. Decide the center by cross pattern of static convergence in menu, and adjust convergence from center to circumference.

4. ADJUSTING PICTURE DIMENSION (GREEN PICTURE)

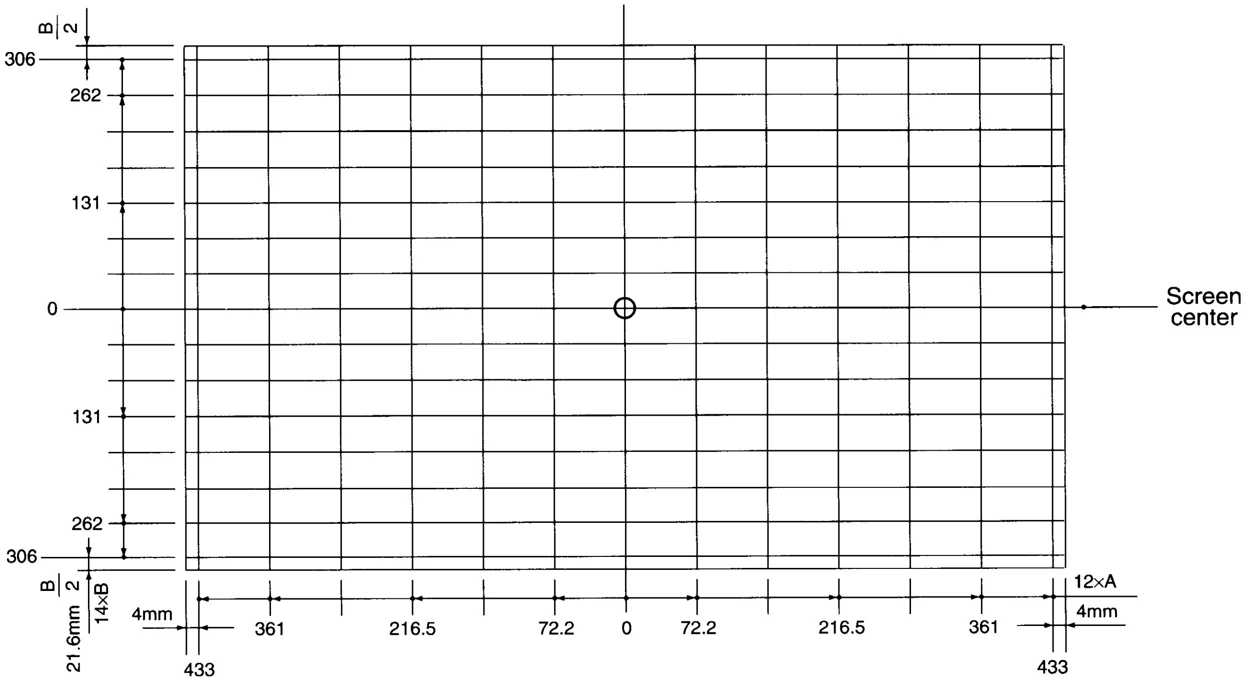
1.50 Hz mode (PAL)


Screen center
17mm
310.5
274
164.5
55
0
55
164.5
274
310.5
17mm
17×B
4mm
361
216.5
72.2
0
72.2
216.5
361
12×A
4mm
433
433
Screen center

43 inches 4:3 Screen size: Horizontal 874mm, Vertical 655mm
Dimension A: 72.2mm, Dimension B: 36.5mm

○ mark: center

2. 60Hz mode (NTSC)


B/2
306
262
131
0
131
262
306
B/2
21.6mm
14×B
4mm
361
216.5
72.2
0
72.2
216.5
361
12×A
4mm
433
433
Screen center

43 inches 4:3 Screen size: Horizontal 874mm, Vertical 655mm
Dimension A: 72.2mm, Dimension B: 43.7mm

SCREEN AND MIRROR ALIGNMENTS

ASSEMBLING AND MOUNTING OF FRONT SCREEN

* Please refer to MECHANICAL DISASSEMBLY page.35.

CLEANING OF LENS AND MIRROR

CAUTION : Do not hold the optical system parts (lens and mirror) with bare hand to avoid finger-prints on the surface of those parts.

HOW TO CLEAN LENS AND MIRROR

1. Be sure to remove sand dust with an air brush, etc.
2. When it is stained slightly, breathe upon it and wipe away with the specified cleaning cloth.
   For other stains than the above, wipe the stains away with the specified cloth into which a cleaning liquid has been soaked.

Cleaning liquid .... **LENS LUSTER** (Manufactured by Edmund Scientific Co.), etc.

HOW TO CLEAN SCREEN

When cleaning the screen, use a soft cloth so as not to damage the screen.

1. Wipe the stain away with a diluted neutral detergent soaked cloth.
2. Wipe the detergent away with a water soaked cloth.
3. Wipe the screen with a dry cloth to remove moisture on the screen.

Note : Absolutely do not use alcohol, benzine, thinner, etc. for cleaning in order not to wipe away the black print on the surface.

CIRCUIT CHECKS

HIGH VOLTAGE CHECK

CAUTION: There is no HIGH VOLTAGE ADJUSTMENT on this chassis. Checking should be done following the steps below.

1. Connect an accurate high voltage meter to the anode of the picture tube.
2. Turn on the receiver. Set the BRIGHTNESS and CONTRAST to minimum (zero beam current).
3. High voltage must be measured below (B) kV.
   Refer to table-1 for high voltage (B).
   (See SETTING & ADJUSTING DATA on page 27)
4. Vary the BRIGHTNESS to both extremes to be sure the high voltage does not exceed the limit under any conditions.

CAUTION:

When the following parts fail, check the High Voltage after replacing.

Location No.	Name	Name
T461	Flyback Trans.	TFB3078BD
D489	Zener Diode	MTZJ7.5B
Q480	Transistor	2SC2023
Q483	IC	TA7508P
R435	Resistor	33k ohm, ±5%
R489	Resistor	3.3k ohm, ±5%
R490	Resistor	3.3k ohm, ±5%
R450	VR	1k ohm
C440	Capacitor	1000pF, ±3%
C443	Capacitor	6800pF, ±3%
C444	Capacitor	5100pF, ±3%

ANODE VOLTAGE MEASURING METHOD

CAUTION: Take extra precaution when measuring this high voltage. High voltages are also present in surrounding circuit boards (CRT DRIVE assembly, DEFLECTION assembly, and POWER SUPPLY assembly).

1. Disconnect the FBT anode cable as outlined below. Measure high voltage at the point where the cable enters the FBT.
2. Holding the rubber cover firmly, turn it counterclockwise and check that the lock has been disengaged. (See Fig. b on page 8.)
3. Determine the extent of the rubber cover before disconnecting the cable.
4. Pull straight up the anode cable to disconnect.
5. When reconnecting the cable, proceed in the reverse order.
   After reconnecting, tug on the cable to check that it is secure.

CHAPTER 2 SPECIFIC INFORMATIONS

SETTING & ADJUSTING DATA

【 SAFETY INSTRUCTIONS 】

		43"
HIGH VOLTAGE AT ZERO BEAM:	(A)	31.9 kV
MAX HIGH VOLTAGE:	(B)	32.5 kV
AV VOLTAGE	(C)	110~240 V

Table-1

【 SERVICE MODE 】

ADJUSTING ITEMS AND DATAS IN THE SERVICE MODE:

Item	Adjustment	Reference data
RCUT	R CUTOFF (B/W)	40H
GCUT	G CUTOFF (B/W)	40H
BCUT	B CUTOFF (B/W)	40H
RDRV	R DRIVE	40H
BDRV	B DRIVE	40H
CNTX	SUB CONTRAST MAX	7FH
BRTC	SUB BRIGHT CEN	80H
COLC	SUB COLOR CEN NTSC	27H
TNTC	SUB TINT CEN	44H
COLP	SUB COLOR CEN PAL	27H
COLS	SUB COLOR CEN SECAM	27H
SCOL	SUB COLOR	1FH
SCNT	SUB CONTRAST	0CH
VOLS	VOL SCART	75H
FVOL	FM VOL PRE SCALE	15H
NVOL	NICAM VOL PRE SCALE	3CH
NICL	NICAM THRESHOLD LEVEL	03H
NICH	NICAM THRESHOLD LEVEL	0AH
IDL	IGR THRESHOLD LEVEL	04H
IDH	IGR THRESHOLD LEVEL	0EH

Item	Adjustment	Reference data
XVOL	EXT PRE. VOLUME	11H
EMX	NICAM ON LEVEL	FCH
EMN	NICAM OFF LEVEL	64H
HPOS	50Hz H-POSITION	0DH
VPOS	V-POSITION	04H
HIT	HEIGHT	5CH
VLIN	V-LINEARITY	13H
VSC	V-S CORRECTION	08H
VPS	V-SHIFT	15H
VCP	V-COMPENSATION	0AH
WID	PICTURE WIDTH	24H
PARA	E-W PARABOLA	05H
CNR	E-W CORNER	00H
TRAP	TRAPEZIUM	10H
HCP	H-COMPENSATION	0AH
VFC	V-F CORRECTION	0FH
BELL	SECAM BELL FILTER	80H
SRY	SECAM R-Y	08H
SBY	SECAM-B-Y	08H

Table-2

【 DESIGN MODE 】

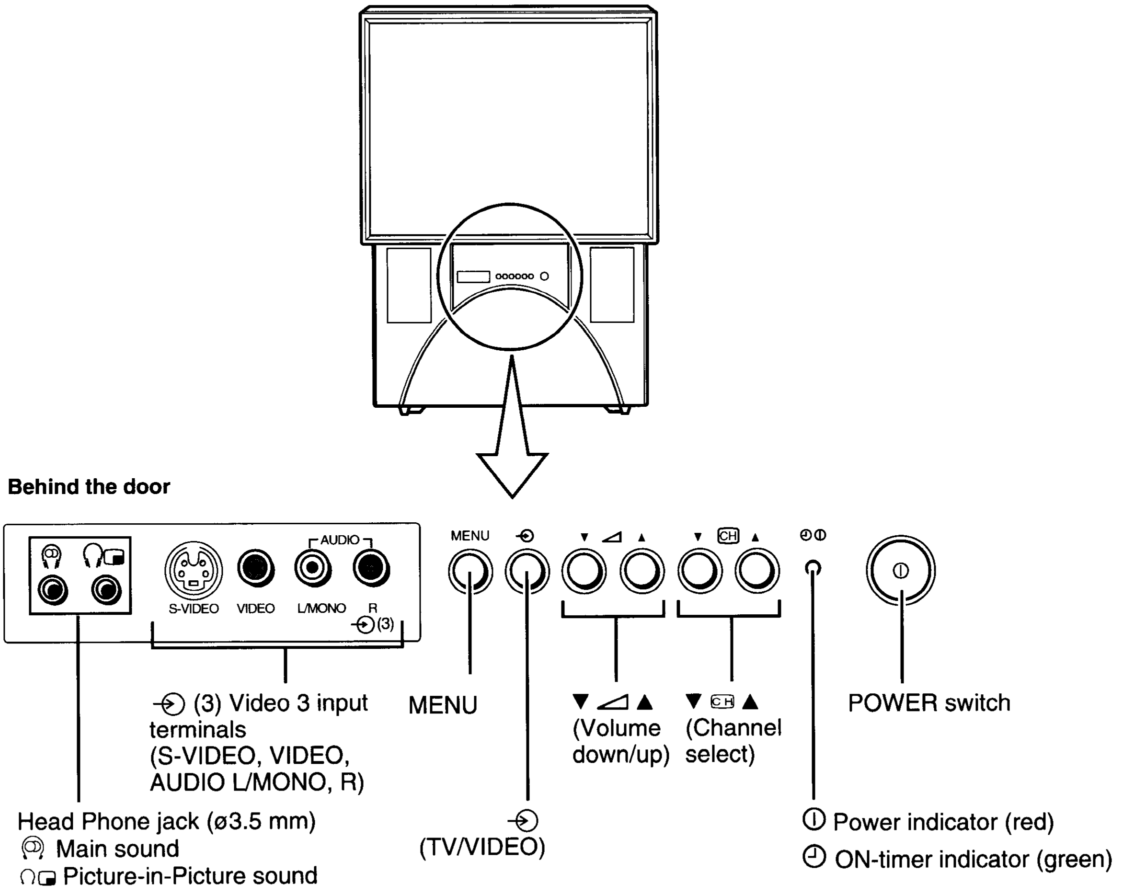
ADJUSTING ITEMS AND DATAS IN THE DESIGN MODE:

Item	Name of adjustment	Preset Data	UXH	UXE, UXA, UXM	Remarks
RCUT					
OPT1	OPTION 1	12H	13H	13H	
OPT0	OPTION 0	00H	00H	06H	
OSD					
· · · · ·					
RCUT					

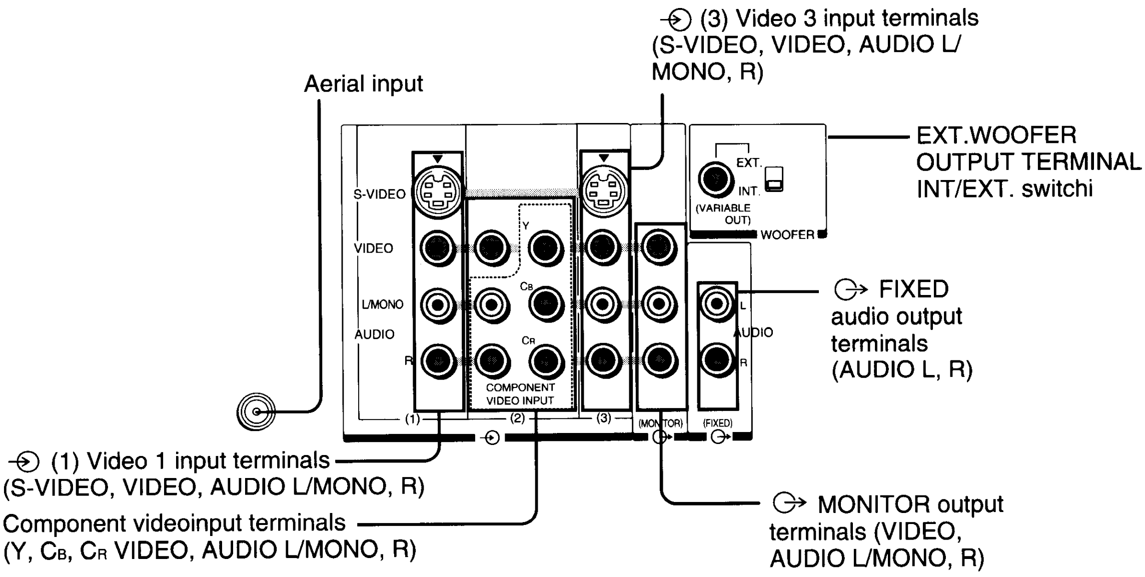
Table-3

LOCATION OF CONTROLS

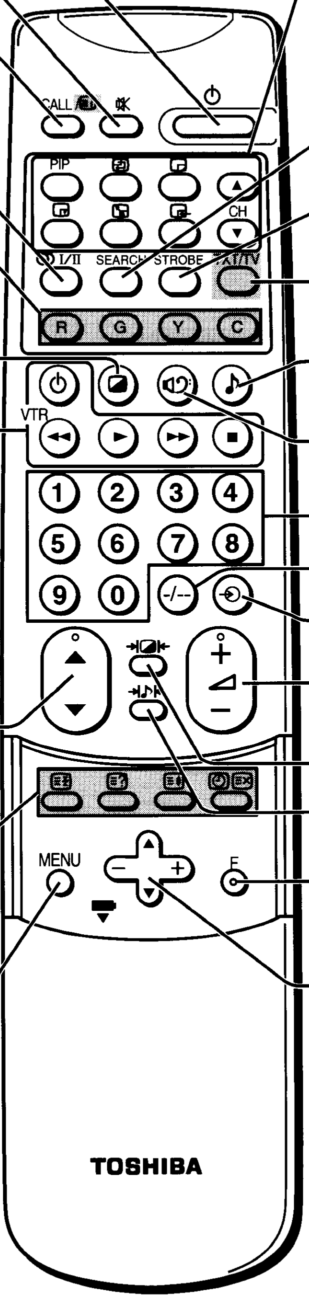
Front


Behind the door
AUDIO
S-VIDEO
VIDEO
L/MONO
R
⊕(3)
MENU
⊕
▼ ◁ ▲
▼ CH ▲
⊕ (3) Video 3 input terminals (S-VIDEO, VIDEO, AUDIO L/MONO, R)
MENU
▼ ◁ ▲ (Volume down/up)
▼ CH ▲ (Channel select)
POWER switch
Head Phone jack (ø3.5 mm)
Main sound
Picture-in-Picture sound
⊕ (TV/VIDEO)
Power indicator (red)
ON-timer indicator (green)

Back


⊕ (3) Video 3 input terminals (S-VIDEO, VIDEO, AUDIO L/MONO, R)
Aerial input
S-VIDEO
VIDEO
L/MONO
AUDIO
R
Y
CB
CR
COMPONENT VIDEO INPUT
(1)
(2)
(3)
⊕
EXT.
INT.
(VARIABLE OUT)
WOOFER
L
AUDIO
R
(MONITOR)
(FIXED)
EXT.WOOFER OUTPUT TERMINAL INT/EXT. switchi
→ FIXED audio output terminals (AUDIO L, R)
⊕ (1) Video 1 input terminals (S-VIDEO, VIDEO, AUDIO L/MONO, R)
Component videoinput terminals (Y, CB, CR VIDEO, AUDIO L/MONO, R)
→ MONITOR output terminals (VIDEO, AUDIO L/MONO, R)

Remote Controller



⏻ Power on/standby

Sound mute

CALL (On-screen call)
(index, initial)

I/II Stereo/bilingual select

Text select
R (Red)
G (Green)
Y (Yellow)
C (Cyan)

Picture control

VTR control
⏻ Power on/standby
► Play
■ Stop
◄◄ Rewind
►► Fast forward
Toshiba video recorder can be operated with these buttons.

POSITION ▼/▲
Position down/up
(Channel select)

Teletext
Stop
Reveal/conceal
Full/top/bottom
Time/text cancel

MENU
(Menu open/close)

P-in-P
ON/OFF
Input select
Contrast control
Swap
Still
Location
CH ▼/▲ Channel down/up

SEARCH(Multi window on/off)

STROBE(Strobe on/off)

TXT/TV
(Text/mix/TV select)

Sound control

Bass boost

Direct select

-/-- Digit select

TV/VIDEO input select

–/+ Volume down/up
(Level down/up)

Selectable picture

Selectable sound

F (Quick operation)

Menu ▼/▲ menu item select
Menu –/+ menu item adjust

▨ : The buttons marked with ▨ are not existence for some model.

PROGRAMMING CHANNEL MEMORY

- First, use the ASM (Automatic Search Memory) function to preset all the active channels in your area automatically.
  Then, arrange the preset channels with the MANUAL SEARCH (>>>), MFT (Manual Fine Tuning) and SKIP functions so that you can tune into only desired channels.
- This section shows how to tune in channels using mainly the Remote Controller. You can also perform the system select, ASM, MANUAL SEARCH (>>>), MFT and SKIP operations using the buttons on the TV set.

To preset channels (ASM)

ASM (Automatic Search Memory)

1 Select the first position number you want the ASM to start presetting from with the **POSITION ▼/▲** buttons or the direct select buttons.

2 Press the **MENU** button repeatedly to call up the SET UP menu on the screen.

3 Confirm that "COLOR" is set to "AUTO" and "SOUND" is set to proper system.
If not, press the **MENU ▼/▲** (or position ▼/▲) buttons to move the cursor (▶) to "COLOR" or "SOUND" then press the **MENU** –/+ (or⊿ –/+) buttons to select the proper systems.

4 Press the **MENU ▼/▲** (or position ▼/▲) buttons to move the cursor (▶) to "ASM".

5 Press the **MENU** + (or⊿ +) button to start the ASM.
All active channels will be preset automatically.
When presetting is complete, the initial position number will reappear.

After presetting
Check the preset channels by pressing the **POSITION ▼/▲** buttons.

- If the picture or sound of a certain channel is not good, re-tune the channel using the ASM, MANUAL SEARCH (>>>) or MFT function.
- If the colour of a certain channel is abnormal, the automatic colour system selection (AUTO) may have malfunctioned, or sound system selection is wrong. In such a case, select another colour and/or sound system.

MFT (Manual Fine Tuning)

The adjustments below are not necessary under normal conditions. However, in areas of inferior broadcast conditions where adjustment is necessary for a better picutre, adjust the tuning with the MFT (Manual Fine Tuning).

1 Select the channel you want to fine-tune with the **POSITION ▼/▲** buttons or direct select buttons.

2 Press the **MENU** button repeatedly to call up the SET UP menu on the screen.

3 Press the **MENU ▼/▲** (or position ▼/▲) buttons to move the cursor (▶) to "MFT".

4 Press the **MENU** –/+ (or⊿ –/+) buttons until the best possible picture and sound are obtained.
[–]DOWN or [+]UP is highlighted while tuning in.

- Use the MANUAL SEARCH (>>>) function if desired channels cannot be preset with the ASM or if you would like to preset channels to specific position numbers one by one.
- It is convenient to set the channel numbers to the same position numbers using MANUAL SEARCH (>>>) and SKIP functions.

To preset channels (Manual search) and skip unnecessary position numbers

Manual search (>>>)

1 Select a desired position number with the **POSITION** ▼/▲ or direct select buttons.

2 Press the **MENU** button repeatedly to call up the SET UP menu on the screen.

3 Press the **MENU** ▼/▲ (or position ▼/▲) buttons to move the cursor (▶) to " >>> ".

4 Press the **MENU** –/+ (or⊿ –/+)buttons to start searching. The **MENU** – (or⊿ –) button searches for lower-numbered channels; the **MENU** + (or⊿ +) button for higher-numbered channels.
Repeat this process until you can get the desired channel.

5 When the desired channel is shown, press the **MENU** ▼/▲ buttons (or position ▼/▲) to move the cursor (▶) to "–◈–".

6 Press the **MENU** + (or⊿ +) button to store the channel at the current position.

7 When you desire to store another channel at another position, move the cursor (▶) to "POSITION" with the **MENU** ▼/▲ (or position ▼/▲)buttons and select a desired position number with the **MENU** –/+ (or⊿ –/+)buttons. Then, press the **MENU** ▼/▲ (or position ▼/▲) buttons to move the cursor (▶) to " >>> " and repeat the steps 4 to 7. Or, repeat the steps 1 to 7 after the display disappears.

To skip a position number

After presetting the channels, you may skip unnecessary position numbers so that only the channels you want to watch are selected.

1 Select the position number to be skipped with the **POSITION** ▼/▲ buttons or direct select buttons.

2 Press the **MENU** button repeatedly to call up the SET UP menu on the screen.

3 Press the **MENU** ▼/▲ (or position ▼/▲) buttons to move the cursor (▶) to "SKIP".

4 Press the **MENU** –/+ (or⊿ –/+) buttons to select "SKIP ON".

5 Press the **CALL** button to turn off the SET UP menu display.
Select the position number to be skipped with the direct select buttons. The * mark appears to the left of the position number.
The position number will then be skipped when you select channels with the **POSITION** ▼/▲ buttons.

To restore a skipped position number

1. Select the position number you want to restore with the direct select buttons.
2. Press the **MENU** button to call up the SET UP menu display and press the **MENU** ▼/▲ (or position ▼/▲) buttons to move the cursor (▶) to "SKIP".
3. Press the **MENU** –/+ (or⊿ –/+) buttons to select "SKIP OFF".

*Please refer to owner's manual in detail.

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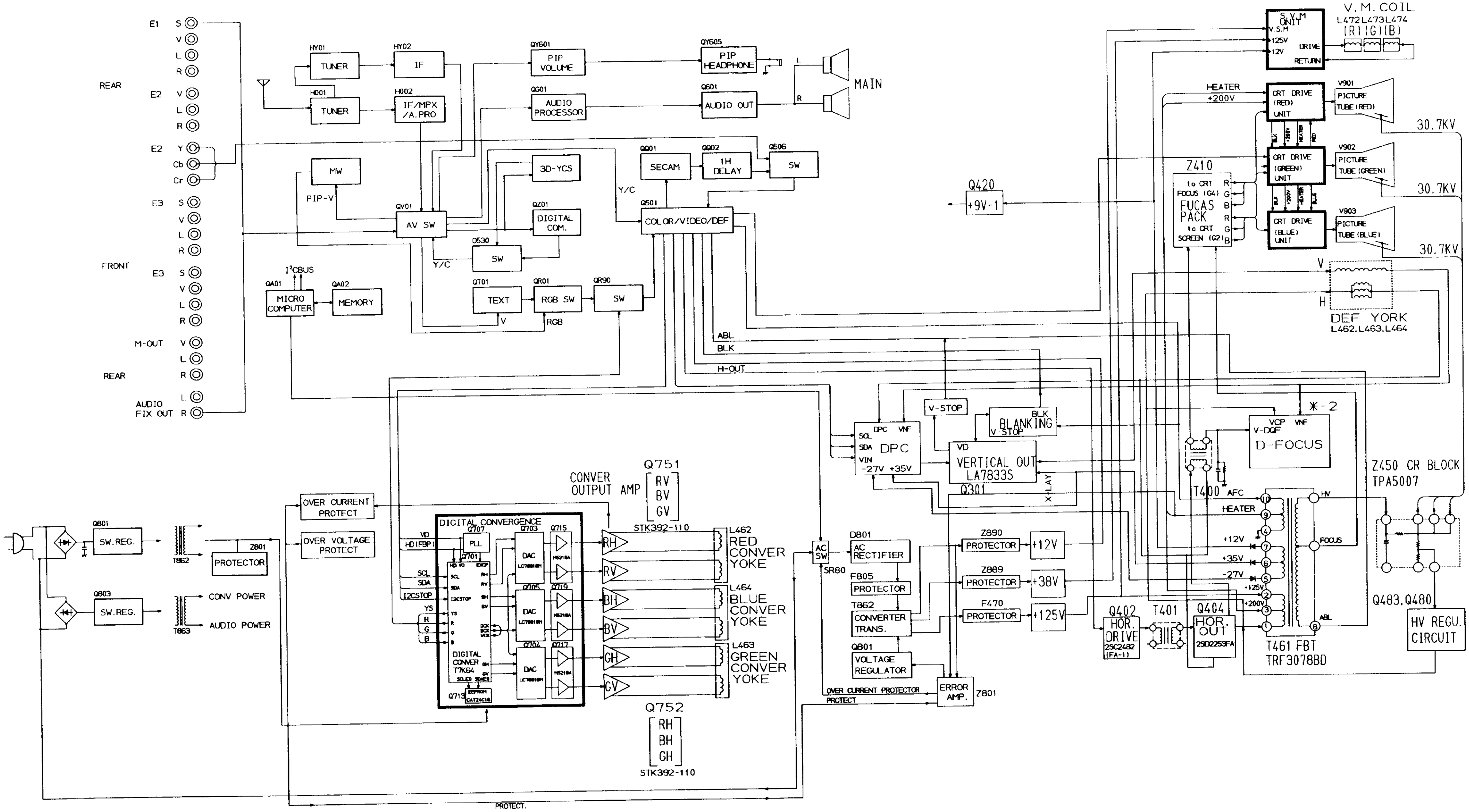
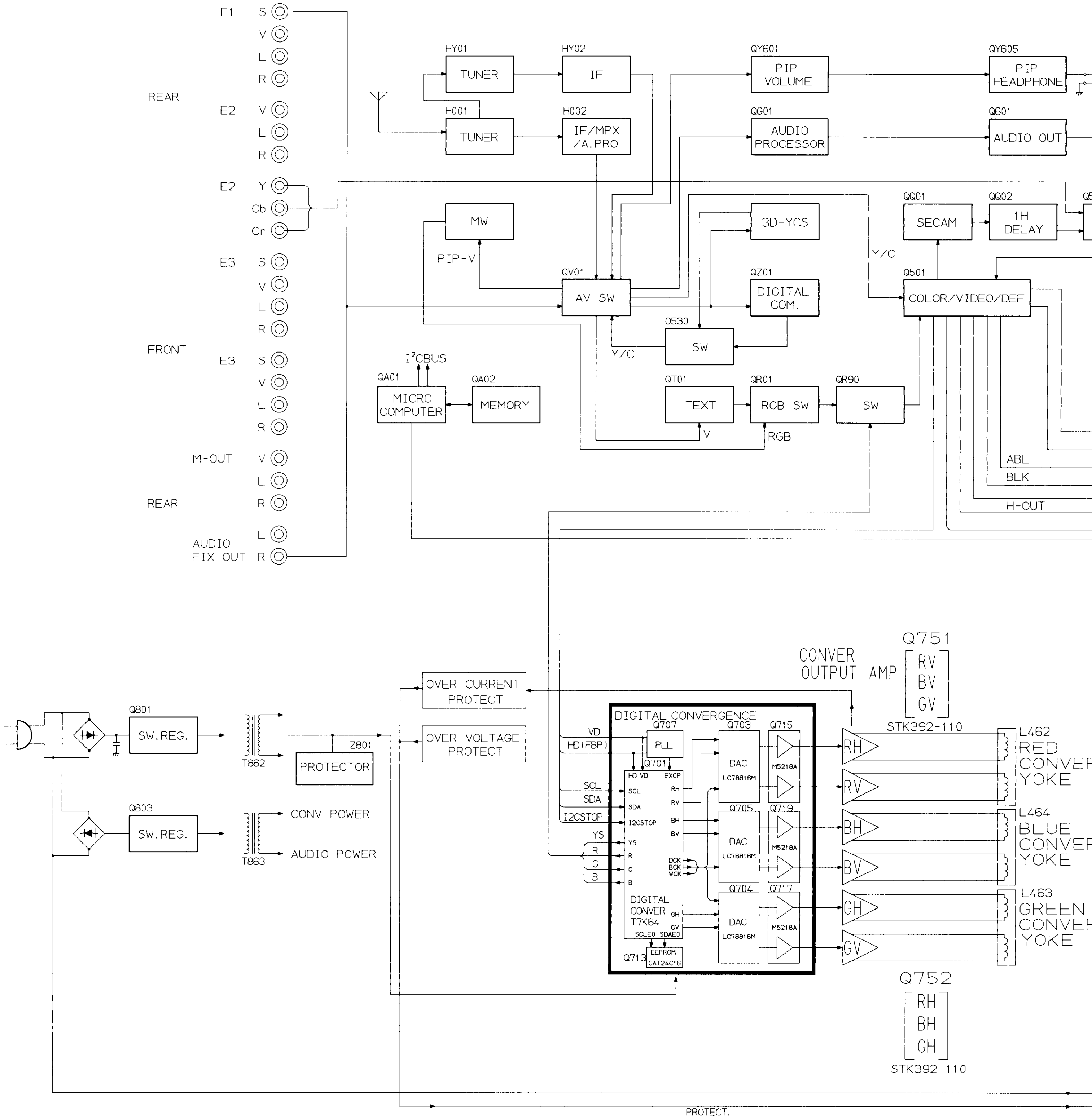
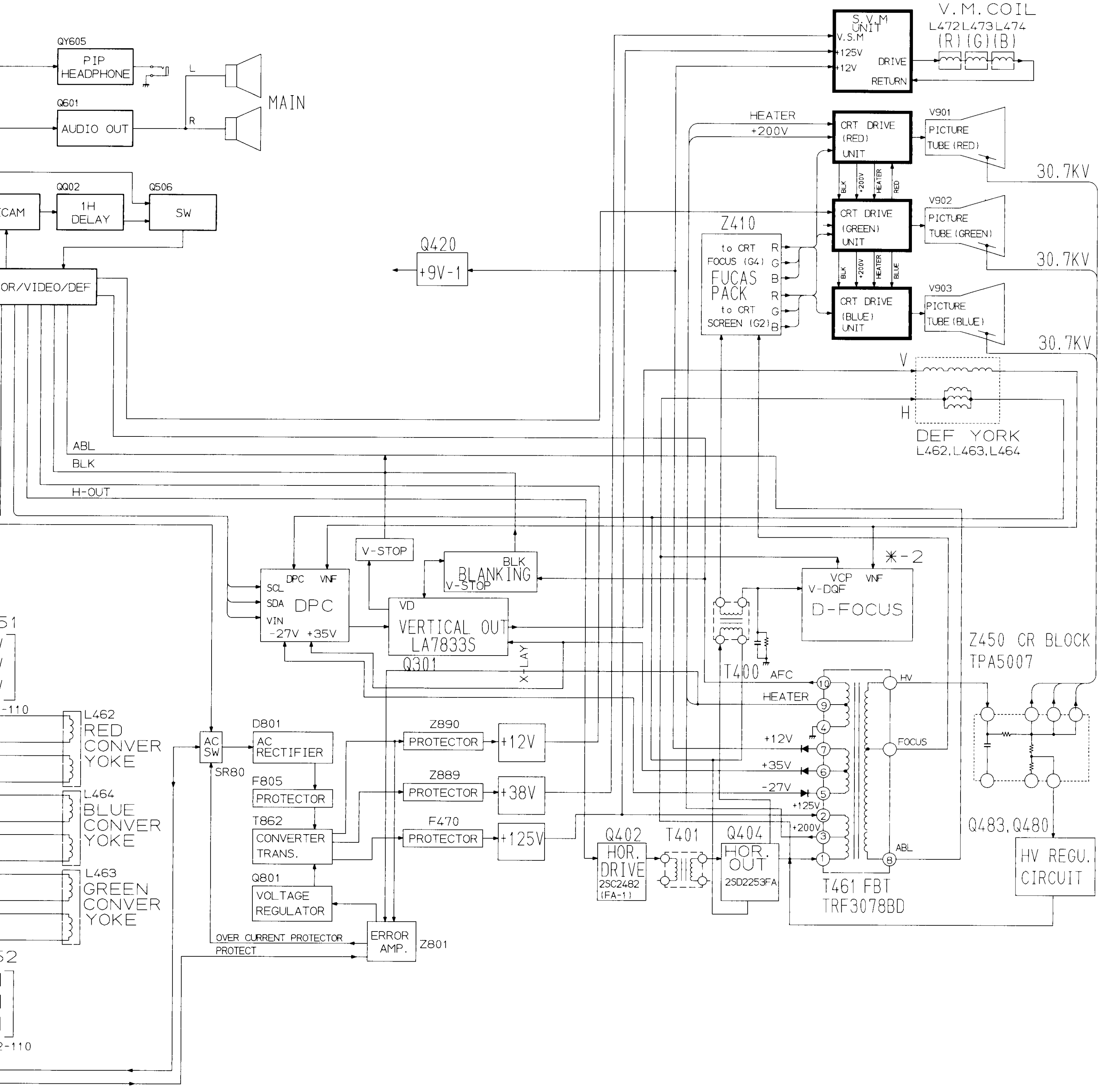
CIRCUIT BLOCK DIAGRAM


E1
S
V
L
R
REAR
E2
V
L
R
E2
Y
Cb
Cr
E3
S
V
L
R
FRONT
E3
S
V
L
R
M-OUT
V
L
R
REAR
AUDIO
FIX OUT
L
R
HY01
TUNER
HY02
IF
H001
TUNER
H002
IF/MPX
/A.PRO
QY601
PIP
VOLUME
QG01
AUDIO
PROCESSOR
QY605
PIP
HEADPHONE
Q601
AUDIO OUT
L
R
MAIN
MW
PIP-V
QV01
AV SW
3D-YCS
QZ01
DIGITAL
COM.
Q530
SW
Y/C
Y/C
Q001
SECAM
Q002
1H
DELAY
Q506
SW
Q501
COLOR/VIDEO/DEF
I²CBUS
QA01
MICRO
COMPUTER
QA02
MEMORY
QT01
TEXT
QR01
RGB SW
QR90
SW
V
RGB
ABL
BLK
H-OUT
Q420
+9V-1
S.V.M
UNIT
V.S.M
125V
12V
DRIVE
RETURN
V.M.COIL
L472L473L474
(R)(G)(B)
HEATER
+200V
CRT DRIVE
(RED)
UNIT
V901
PICTURE
TUBE (RED)
30.7KV
CRT DRIVE
(GREEN)
UNIT
V902
PICTURE
TUBE (GREEN)
30.7KV
CRT DRIVE
(BLUE)
UNIT
V903
PICTURE
TUBE (BLUE)
30.7KV
BLK
+200V
HEATER
RED
BLK
200V
HEATER
BLUE
Z410
to CRT
FOCUS (G4)
FUCAS
PACK
to CRT
SCREEN (G2)
R
G
B
R
G
B
V
H
DEF YORK
L462,L463,L464
V-STOP
BLK
BLANKING
V-STOP
SCL
SDA
VIN
DPC
VNF
DPC
-27V +35V
VD
VERTICAL OUT
LA7833S
Q301
X-LAY
VCP VNF
V-DQF
D-FOCUS
✻-2
T400
AFC
HEATER
+12V
+35V
-27V
+125V
+200V
HV
FOCUS
ABL
Z450 CR BLOCK
TPA5007
Q483,Q480
HV REGU.
CIRCUIT
Q402
HOR.
DRIVE
2SC2482
(FA-1)
T401
Q404
HOR.
OUT
2SD2253FA
T461 FBT
TRF3078BD
Q801
SW.REG.
T862
Z801
PROTECTOR
Q803
SW.REG.
T863
CONV POWER
AUDIO POWER
OVER CURRENT
PROTECT
OVER VOLTAGE
PROTECT
DIGITAL CONVERGENCE
Q707
PLL
Q701
Q703
DAC
Q715
Q705
DAC
Q719
Q704
DAC
Q717
VD
HD(FBP)
SCL
SDA
I2CSTOP
YS
R
G
B
DIGITAL
CONVER
T7K64
Q713
EEPROM
CAT24C16
CONVER
OUTPUT AMP
Q751
RV
BV
GV
STK392-110
RH
RV
BH
BV
GH
GV
L462
RED
CONVER
YOKE
L464
BLUE
CONVER
YOKE
L463
GREEN
CONVER
YOKE
Q752
RH
BH
GH
STK392-110
AC
SW
SR80
D801
AC
RECTIFIER
F805
PROTECTOR
T862
CONVERTER
TRANS.
Q801
VOLTAGE
REGULATOR
Z890
PROTECTOR
+12V
Z889
PROTECTOR
+38V
F470
PROTECTOR
+125V
OVER CURRENT PROTECTOR
PROTECT
ERROR
AMP.
Z801
PROTECT.

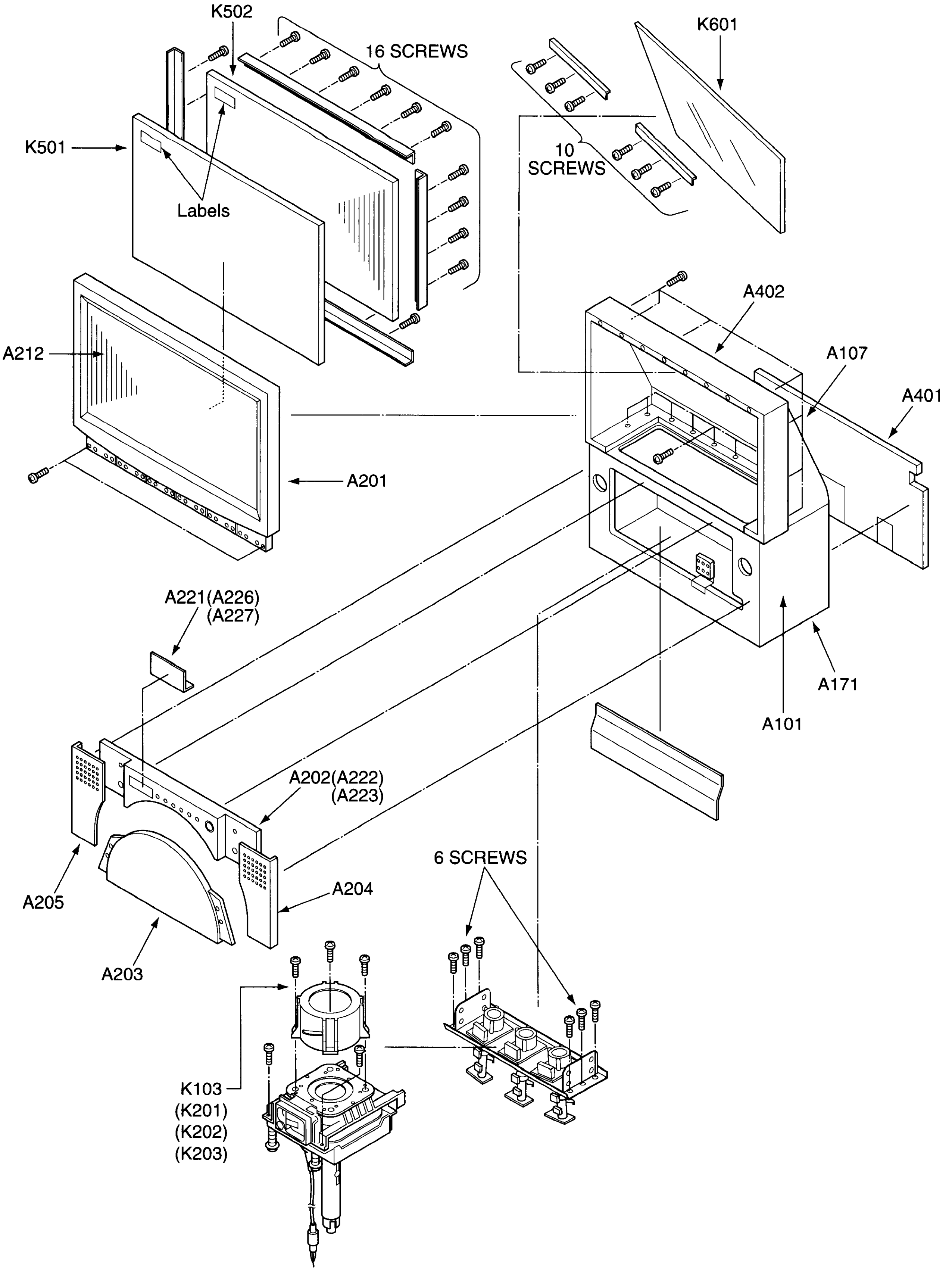
CIRCUIT BLOCK DI


E1
S
V
L
R
REAR
E2
V
L
R
E2
Y
Cb
Cr
E3
S
V
L
R
FRONT
E3
S
V
L
R
M-OUT
V
L
REAR
R
AUDIO
FIX OUT
L
R
HY01
TUNER
HY02
IF
H001
TUNER
H002
IF/MPX
/A.PRO
QY601
PIP
VOLUME
QG01
AUDIO
PROCESSOR
QY605
PIP
HEADPHONE
Q601
AUDIO OUT
MW
PIP-V
QV01
AV SW
3D-YCS
QZ01
DIGITAL
COM.
Q530
SW
Y/C
Y/C
QQ01
SECAM
QQ02
1H
DELAY
Q501
COLOR/VIDEO/DEF
I²CBUS
QA01
MICRO
COMPUTER
QA02
MEMORY
QT01
TEXT
V
QR01
RGB SW
RGB
QR90
SW
ABL
BLK
H-OUT
Q801
SW.REG.
T862
Z801
PROTECTOR
Q803
SW.REG.
T863
CONV POWER
AUDIO POWER
OVER CURRENT
PROTECT
OVER VOLTAGE
PROTECT
DIGITAL CONVERGENCE
VD
HD(FBP)
Q707
PLL
Q701
HD VD
EXCP
SCL
SDA
I2CSTOP
YS
R
G
B
RH
RV
BH
BV
DCK
BCK
WCK
DIGITAL
CONVER
T7K64
GH
GV
SCLE0 SDAE0
Q713
EEPROM
CAT24C16
Q703
DAC
LC78816M
Q715
M5218A
Q705
DAC
LC78816M
Q719
M5218A
Q704
DAC
LC78816M
Q717
M5218A
CONVER
OUTPUT AMP
Q751
RV
BV
GV
STK392-110
RH
RV
BH
BV
GH
GV
L462
RED
CONVER
YOKE
L464
BLUE
CONVER
YOKE
L463
GREEN
CONVER
YOKE
Q752
RH
BH
GH
STK392-110
PROTECT.

T BLOCK DIAGRAM


S.V.M UNIT
V.S.M
+125V
+12V
DRIVE
RETURN
V.M.COIL
L472 L473 L474
(R) (G) (B)
QY605
PIP HEADPHONE
L
R
MAIN
Q601
AUDIO OUT
QQ02
1H DELAY
Q506
SW
CAM
OR/VIDEO/DEF
HEATER
+200V
CRT DRIVE (RED) UNIT
CRT DRIVE (GREEN) UNIT
CRT DRIVE (BLUE) UNIT
BLK
+200V
HEATER
RED
BLUE
V901
PICTURE TUBE (RED)
V902
PICTURE TUBE (GREEN)
V903
PICTURE TUBE (BLUE)
30.7KV
30.7KV
30.7KV
Z410
to CRT FOCUS (G4)
FUCAS PACK
to CRT SCREEN (G2)
R
G
B
R
G
B
Q420
+9V-1
V
H
DEF YORK
L462, L463, L464
ABL
BLK
H-OUT
V-STOP
BLK
BLANKING
V-STOP
DPC
VNF
SCL
SDA
DPC
VIN
-27V +35V
VD
VERTICAL OUT
LA7833S
Q301
X-LAY
*-2
VCP VNF
V-DQF
D-FOCUS
T400
AFC
HEATER
+12V
+35V
-27V
+125V
+200V
HV
FOCUS
ABL
10
9
4
7
6
5
2
3
1
8
Z450 CR BLOCK
TPA5007
Q483, Q480
HV REGU. CIRCUIT
T461 FBT
TRF3078BD
Q402
HOR. DRIVE
2SC2482 (FA-1)
T401
Q404
HOR. OUT
2SD2253FA
51
-110
L462
RED CONVER YOKE
L464
BLUE CONVER YOKE
L463
GREEN CONVER YOKE
52
2-110
AC SW
SR80
D801
AC RECTIFIER
F805
PROTECTOR
T862
CONVERTER TRANS.
Q801
VOLTAGE REGULATOR
Z890
PROTECTOR
+12V
Z889
PROTECTOR
+38V
F470
PROTECTOR
+125V
ERROR AMP.
Z801
OVER CURRENT PROTECTOR
PROTECT

MECHANICAL DISASSEMBLY


K502
16 SCREWS
K601
K501
Labels
10 SCREWS
A402
A212
A107
A401
A201
A221(A226)
(A227)
A171
A101
A202(A222)
(A223)
6 SCREWS
A205
A204
A203
K103
(K201)
(K202)
(K203)

CHASSIS AND CABINET REPLACEMENT PARTS LIST

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 3 OF THIS MANUAL.

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE . Do not degrade the safety of the receiver through improper servicing.

NOTICE:

- *The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.*
- *The PC board assembly with * mark is no longer available after the end of the production.*

ABBREVIATIONS:

Capacitors	CD	:	Ceramic Disk	PF	:	Plastic Film	EL	:	Electrolytic
Resistors	CF	:	Carbon Film	CC	:	Carbon Composition	MF	:	Metal Film
	OMF	:	Oxide Metal Film	VR	:	Variable Resistor	FR	:	Fusible Resistor

(All CD and PF capacitors are ±5%, 50V and all resistors, ±5%, 1/6W unless otherwise noted.)

Models : 43N9UXE, 43N9UXH, 43N9UXM, 43N9UXA

Location No.	Part No.	Description
CAPACITORS		
C101	24796479	EL, 4.7μF, ±20%, 35V
C102	24763221	EL, 220μF, ±20%, 16V
C104	24794470	EL, 47μF, ±20%, 16V
C105	24212102	CD, 1000pF, ±10%
C106	24797100	EL, 10μF, ±20%, 50V
C107	24763221	EL, 220μF, ±20%, 16V
C109	24232103	CD, 0.01μF, +80%, -20%
C111	24763221	EL, 220μF, ±20%, 16V
C112	24212102	CD, 1000pF, ±10%
C113	24232103	CD, 0.01μF, +80%, -20%
C114	24763101	EL, 100μF, ±20%, 16V
C115	24232103	CD, 0.01μF, +80%, -20%
C116	24232103	CD, 0.01μF, +80%, -20%
C117	24797479	EL, 4.7μF, ±20%, 50V
C190	24232103	CD, 0.01μF, +80%, -20%
C201	24794100	EL, 10μF, ±20%, 16V
C203	24567104	PF, 0.1μF
C204	24797010	EL, 1μF, ±20%, 50V
C205	24206229	EL, 2.2μF, ±20%, 50V
C206	24794100	EL, 10μF, ±20%, 16V
C207	24436390	CD, 39pF
C208	24436390	CD, 39pF
C209	24436390	CD, 39pF
C212	24794100	EL, 10μF, ±20%, 16V
C213	24567334	PF, 0.33μF
C260	24085967	EL, 47μF, ±20%, 16V, Non-Polar
C303	24214471	CD, 470pF, ±10%, 500V
C305	24617912	EL, 2.2μF, ±10%, 50V
C306	24617858	EL, 3300μF, ±20%, 35V
C307	24693473	PF, 0.047μF, 100V
C308	24668221	EL, 220μF, ±20%, 35V
C309	24212101	CD, 100pF, ±10%
C310	24669222	EL, 2200μF, ±20%, 50V
C311	24214561	CD, 560pF, ±10%, 500V
C313	24082057	PF, 0.22μF, 100V
C314	24591103	PF, 0.01μF
C315	24797229	EL, 2.2μF, ±20%, 50V
C316	24591102	PF, 1000pF
C317	24591103	PF, 0.01μF
C318	24617026	EL, 820μF, ±20%, 16V
C319	24591102	PF, 1000pF
C320	24669101	EL, 100μF, ±20%, 50V
C321	24591183	PF, 0.018μF
C322	24617912	EL, 2.2μF, ±10%, 50V
C323	24591224	PF, 0.22μF
C326	24591683	PF, 0.068μF
C340	24666100	EL, 10μF, ±20%, 16V
C350	24591104	PF, 0.1μF
C351	24666222	EL, 2200μF, ±20%, 16V
C352	24669229	EL, 2.2μF, ±20%, 50V
C360	24667100	EL, 10μF, ±20%, 25V
C361	24669100	EL, 10μF, ±20%, 50V
C362	24591104	PF, 0.1μF
C363	24085946	EL, 10μF, ±20%, 16V, Non-Polar
C364	24666100	EL, 10μF, ±20%, 16V
C370	24669101	EL, 100μF, ±20%, 50V
C371	24668100	EL, 10μF, ±20%, 35V
C401	24567104	PF, 0.1μF
C403	24591203	PF, 0.02μF
C403	24828124	PF, 0.12μF, 200V
C404	24797229	EL, 2.2μF, ±20%, 50V
C413	24214821	CD, 820pF, ±10%, 500V
C415	24591392	PF, 3900pF
C416	24678100	EL, 10μF, ±20%, 200V
C417	24214391	CD, 390pF, ±10%, 500V
C418	24095883	PF, 0.015μF, ±3%, 630V
C419	24829623	PF, 0.063μF, 400V
C420	24666101	EL, 100μF, ±20%, 16V
C423	24082656	PF, 0.62μF, 400V
C430	24232103	CD, 0.01μF, +80%, -20%
C431	24794101	EL, 100μF, ±20%, 16V
C440	24082930	PF, 6800pF, ±3%, 1500V
C443	24082929	PF, 6800pF, ±3%, 1500V
C444	24082836	PF, 5100pF, ±3%, 1800V
C445	24828473	PF, 0.047μF, 200V
C446	24679330	EL, 33μF, ±20%, 250V
C447	24667102	EL, 1000μF, ±20%, 25V
C448	24640908	EL, 33μF, ±20%, 160V
C458	24667100	EL, 10μF, ±20%, 25V

Location No.	Part No.	Description
C459	24669478	EL, 0.47μF, ±20%, 50V
C460	24669331	EL, 330μF, ±20%, 50V
C463	24212152	CD, 1500pF, ±10%
C465	24591332	PF, 3300pF
C466	24567394	PF, 0.39μF
C467	24820153	PF, 0.015μF, 630V
C468	24567474	PF, 0.47μF
C471	24669479	EL, 4.7μF, ±20%, 50V
C475	24820103	PF, 0.01μF, 630V
C477	24092347	CD, 1500pF, ±10%, 2kV
C481	24567104	PF, 0.1μF
C482	24591152	PF, 1500pF
C483	24567224	PF, 0.22μF
C484	24640872	EL, 10μF, ±20%, 100V
C485	24669101	EL, 100μF, ±20%, 50V
C486	24591223	PF, 0.022μF
C493	24082054	PF, 0.12μF, 100V
C500	24353010	CD, 1pF, ±0.25pF, CH
C501	24436101	CD, 100pF
C502	24232103	CD, 0.01μF, +80%, -20%
C503	24763101	EL, 100μF, ±20%, 16V
C504	24591222	PF, 2200pF
C505	24353120	CD, 12pF, CH
C507	24353120	CD, 12pF, CH
C508	24794100	EL, 10μF, ±20%, 16V
C509	24763101	EL, 100μF, ±20%, 16V
C510	24763101	EL, 100μF, ±20%, 16V
C511	24232103	CD, 0.01μF, +80%, -20%
C512	24206228	EL, 0.22μF, ±20%, 50V
C513	24232103	CD, 0.01μF, +80%, -20%
C514	24567104	PF, 0.1μF
C515	24567104	PF, 0.1μF
C517	24353010	CD, 1pF, ±0.25pF, CH
C520	24436561	CD, 560pF
C521	24353181	CD, 180pF, CH
C522	24212102	CD, 1000pF, ±10%
C523	24212102	CD, 1000pF, ±10%
C524	24436470	CD, 47pF
C525	24436470	CD, 47pF
C526	24436470	CD, 47pF
C527	24232103	CD, 0.01μF, +80%, -20%
C528	24794100	EL, 10μF, ±20%, 16V
C530	24212102	CD, 1000pF, ±10%
C532	24794101	EL, 100μF, ±20%, 16V
C533	24436331	CD, 330pF
C534	24436331	CD, 330pF
C535	24436331	CD, 330pF
C536	24794101	EL, 100μF, ±20%, 16V
C537	24232103	CD, 0.01μF, +80%, -20%
C538	24794100	EL, 10μF, ±20%, 16V
C541	24794470	EL, 47μF, ±20%, 16V
C601	24591102	PF, 1000pF
C602	24591102	PF, 1000pF
C603	24797100	EL, 10μF, ±20%, 50V
C604	24797100	EL, 10μF, ±20%, 50V
C605	24795101	EL, 100μF, ±20%, 25V
C606	24795101	EL, 100μF, ±20%, 25V
C607	24591104	PF, 0.1μF
C608	24591104	PF, 0.1μF
C609	24669102	EL, 1000μF, ±20%, 50V
C610	24669102	EL, 1000μF, ±20%, 50V
C611	24795221	EL, 220μF, ±20%, 25V
C612	24763471	EL, 470μF, ±20%, 16V
C613	24797478	EL, 0.47μF, ±20%, 50V
C614	24797478	EL, 0.47μF, ±20%, 50V
C615	24232103	CD, 0.01μF, +80%, -20%
C616	24232103	CD, 0.01μF, +80%, -20%
C664	24797479	EL, 4.7μF, ±20%, 50V
C680	24073095	EL, 2200μF, ±20%, 50V
C681	24591104	PF, 0.1μF
C772	24667101	EL, 100μF, ±20%, 25V
C776	24667101	EL, 100μF, ±20%, 25V
⚠C801	24082374	PF, 0.22μF, ±20%, AC250V
⚠C802	24082374	PF, 0.22μF, ±20%, AC250V
⚠C804	24082374	PF, 0.22μF, ±20%, AC250V
C805	24092281	CD, 4700pF, ±20%, AC250V
C806	24092281	CD, 4700pF, ±20%, AC250V
C808	24617821	EL, 220μF, ±20%, 50V
C810	24086043	EL, 820μF, ±20%, 450V
⚠C811	24092570	CD, 3300pF, ±20%, AC250V
C812	24094654	CD, 470pF, ±20%, AC400V
C812	24617817	EL, 22μF, ±20%, 50V
C813	24567474	PF, 0.47μF
⚠C814	24092568	CD, 1500pF, ±20%, AC250V
C815	24094655	CD, 1000pF, ±20%, AC400V
C816	24617822	EL, 330μF, ±20%, 50V
C817	24092341	CD, 470pF, ±10%, 2kV
C818	24095931	PF, 2200pF, 1250V
⚠C819	24094654	CD, 470pF, ±20%, AC400V
C820	24092343	CD, 680pF, ±10%, 2kV
C821	24082374	PF, 0.22μF, ±20%, AC250V
⚠C824	24082374	PF, 0.22μF, ±20%, AC250V
C829	24590152	PF, 1500pF
C832	24539334	PF, 0.33μF
C833	24539104	PF, 0.1μF
C833	24640860	EL, 2.2μF, ±20%, 100V
C834	24797100	EL, 10μF, ±20%, 50V
C835	24203470	EL, 47μF, ±20%, 16V
C837	24567334	PF, 0.33μF
C837	24669229	EL, 2.2μF, ±20%, 50V
C838	24794101	EL, 100μF, ±20%, 16V
C841	24640891	EL, 220μF, ±20%, 100V
C842	24567474	PF, 0.47μF
C843	24538474	PF, 0.47μF
C844	24567334	PF, 0.33μF
C845	24203101	EL, 100μF, ±20%, 16V
C846	24567104	PF, 0.1μF
C847	24669470	EL, 47μF, ±20%, 50V
C850	24092281	CD, 4700pF, ±20%, AC250V
C851	24092281	CD, 4700pF, ±20%, AC250V
C852	24092281	CD, 4700pF, ±20%, AC250V
C853	24092281	CD, 4700pF, ±20%, AC250V
C854	24086936	EL, 270μF, ±20%, 450V
C855	24092341	CD, 470pF, ±10%, 2kV
C856	24095913	PF, 1500pF, 1250V
C857	24617864	EL, 220μF, ±20%, 50V
C860	24640893	EL, 47μF, ±20%, 100V
C861	24640891	EL, 220μF, ±20%, 100V
C862	24590152	PF, 1500pF
⚠C863	24094655	CD, 1000pF, ±20%, AC400V
⚠C864	24094655	CD, 1000pF, ±20%, AC400V
C865	24214331	CD, 330pF, ±10%, 500V
C866	24214331	CD, 330pF, ±10%, 500V
C867	24214471	CD, 470pF, ±10%, 500V
C869	24640893	EL, 47μF, ±20%, 100V
C870	24617809	EL, 3300μF, ±20%, 35V
C871	24617809	EL, 3300μF, ±20%, 35V
C872	24214471	CD, 470pF, ±10%, 500V

Location No.	Part No.	Description
C873	24617824	EL, 1000µF, ±20%, 50V
C874	24214471	CD, 470pF, ±10%, 500V
C875	24567563	PF, 0.056µF
C876	24617816	EL, 10µF, ±20%, 50V
C877	24617816	EL, 10µF, ±20%, 50V
C878	24567104	PF, 0.1µF
C879	24617816	EL, 10µF, ±20%, 50V
C880	24677470	EL, 47µF, ±20%, 160V
C882	24617816	EL, 10µF, ±20%, 50V
⚠C883	24094655	CD, 1000pF, ±20%, AC400V
C884	24086942	EL, 330µF, 200V
C885	24214471	CD, 470pF, ±10%, 500V
⚠C886	24094655	CD, 1000pF, ±20%, AC400V
C889	24617825	EL, 2200µF, ±20%, 50V
C890	24617817	EL, 22µF, ±20%, 50V
C893	24092338	CD, 270pF, ±10%, 2kV
C894	24617813	EL, 2.2µF, ±20%, 50V
C895	24640891	EL, 220µF, ±20%, 100V
C897	24073076	EL, 6800µF, ±20%, 35V
C898	24567474	PF, 0.47µF
C899	24214471	CD, 470pF, ±10%, 500V
C901	24211102	CD, 1000pF, ±10%, 2kV
C902	24794100	EL, 10µF, ±20%, 16V
C903	24232103	CD, 0.01µF, +80%, -20%
C904	24436681	CD, 680pF
C911	24211102	CD, 1000pF, ±10%, 2kV
C912	24794100	EL, 10µF, ±20%, 16V
C913	24232103	CD, 0.01µF, +80%, -20%
C914	24436681	CD, 680pF
C915	24679330	EL, 33µF, ±20%, 250V
C915A	23960136	Adhesive, TSE3843-W
C916	24794101	EL, 100µF, ±20%, 16V
C921	24211102	CD, 1000pF, ±10%, 2kV
C922	24794100	EL, 10µF, ±20%, 16V
C923	24794470	EL, 47µF, ±20%, 16V
C924	24232103	CD, 0.01µF, +80%, -20%
C925	24794470	EL, 47µF, ±20%, 16V
C926	24436681	CD, 680pF
C930	24794470	EL, 47µF, ±20%, 16V
C941	24797478	EL, 0.47µF, ±20%, 50V
C943	24666102	EL, 1000µF, ±20%, 16V
C944	24203100	EL, 10µF, ±20%, 16V
C961	24666101	EL, 100µF, ±20%, 16V
C962	24203100	EL, 10µF, ±20%, 16V
C963	24232103	CD, 0.01µF, +80%, -20%
C964	24591104	PF, 0.1µF
C8111	24094654	CD, 470pF, ±20%, AC400V
C8121	24094653	CD, 220pF, ±20%, AC400V
C8191	24094653	CD, 220pF, ±20%, AC400V
C7721	24212102	CD, 1000pF, ±10%
C7722	24436101	CD, 100pF
C7724	24667101	EL, 100µF, ±20%, 25V
C7725	24667101	EL, 100µF, ±20%, 25V
C7726	24212102	CD, 1000pF, ±10%
C7727	24436101	CD, 100pF
C7729	24212102	CD, 1000pF, ±10%
C7730	24436101	CD, 100pF
C7732	24212102	CD, 1000pF, ±10%
C7733	24436101	CD, 100pF
C7735	24667101	EL, 100µF, ±20%, 25V
C7736	24669101	EL, 100µF, ±20%, 50V
C7737	24212102	CD, 1000pF, ±10%
C7738	24436101	CD, 100pF
C7740	24212102	CD, 1000pF, ±10%

Location No.	Part No.	Description
C7741	24436101	CD, 100pF
C7742	24436330	CD, 33pF
C7743	24436330	CD, 33pF
C7747	24667101	EL, 100µF, ±20%, 25V
C7748	24567104	PF, 0.1µF
C7749	24567104	PF, 0.1µF
C7750	24667101	EL, 100µF, ±20%, 25V
C7751	24667101	EL, 100µF, ±20%, 25V
C7752	24567104	PF, 0.1µF
C7753	24567104	PF, 0.1µF
C7754	24667101	EL, 100µF, ±20%, 25V
C7755	24667101	EL, 100µF, ±20%, 25V
C7756	24567104	PF, 0.1µF
C7757	24567104	PF, 0.1µF
C7758	24667101	EL, 100µF, ±20%, 25V
C7760	24667470	EL, 47µF, ±20%, 25V
C7761	24669100	EL, 10µF, ±20%, 50V
C7762	24669100	EL, 10µF, ±20%, 50V
C7763	24667470	EL, 47µF, ±20%, 25V
C7764	24598331	PF, 330pF
C7767	24667470	EL, 47µF, ±20%, 25V
C7768	24567104	PF, 0.1µF
C7769	24232103	CD, 0.01µF, +80%, -20%
C7770	24669470	EL, 47µF, ±20%, 50V
C7771	24567103	PF, 0.01µF
C7773	24669101	EL, 100µF, ±20%, 50V
C7774	24436331	CD, 330pF
C7776	24667470	EL, 47µF, ±20%, 25V
C7777	24232103	CD, 0.01µF, +80%, -20%
C9602	24794100	EL, 10µF, ±20%, 16V
CA13	24212101	CD, 100pF, ±10%
CA22	24212101	CD, 100pF, ±10%
CA23	24212101	CD, 100pF, ±10%
CA24	24212101	CD, 100pF, ±10%
CA25	24474101	CD, 100pF, ±10%
CA33	24232103	CD, 0.01µF, +80%, -20%
CA36	24212101	CD, 100pF, ±10%
CA37	24212101	CD, 100pF, ±10%
CA38	24212101	CD, 100pF, ±10%
CA42	24794100	EL, 10µF, ±20%, 16V
CA43	24232103	CD, 0.01µF, +80%, -20%
CA44	24232103	CD, 0.01µF, +80%, -20%
CA68	24794100	EL, 10µF, ±20%, 16V
CA69	24232103	CD, 0.01µF, +80%, -20%
CB01	24794470	EL, 47µF, ±20%, 16V
CB40	24212101	CD, 100pF, ±10%
CB41	24212101	CD, 100pF, ±10%
CB90	24232103	CD, 0.01µF, +80%, -20%
CB91	24232103	CD, 0.01µF, +80%, -20%
CC23	24591104	PF, 0.1µF
CC28	24567474	PF, 0.47µF
CC29	24232103	CD, 0.01µF, +80%, -20%
CD80	24203100	EL, 10µF, ±20%, 16V
CG01	24567224	PF, 0.22µF
CG02	24567104	PF, 0.1µF
CG03	24567104	PF, 0.1µF
CG04	24206010	EL, 1µF, ±20%, 50V
CG05	24797220	EL, 22µF, ±20%, 50V
CG07	24206010	EL, 1µF, ±20%, 50V
CG08	24206010	EL, 1µF, ±20%, 50V
CG09	24206010	EL, 1µF, ±20%, 50V
CG12	24591273	PF, 0.027µF
CG13	24232103	CD, 0.01µF, +80%, -20%
CG14	24203101	EL, 100µF, ±20%, 16V

Location No.	Part No.	Description
CG15	24591822	PF, 8200pF
CG16	24206010	EL, 1μF, ±20%, 50V
CG17	24591273	PF, 0.027μF
CG18	24591822	PF, 8200pF
CG20	24203100	EL, 10μF, ±20%, 16V
CG24	24474102	CD, 1000pF, ±10%
CG25	24206229	EL, 2.2μF, ±20%, 50V
CG26	24206229	EL, 2.2μF, ±20%, 50V
CG30	24203100	EL, 10μF, ±20%, 16V
CG31	24232103	CD, 0.01μF, +80%, -20%
CG32	24232103	CD, 0.01μF, +80%, -20%
CG33	24232103	CD, 0.01μF, +80%, -20%
CQ01	24212102	CD, 1000pF, ±10%
CQ02	24353820	CD, 82pF, CH
CQ03	24212102	CD, 1000pF, ±10%
CQ04	24794100	EL, 10μF, ±20%, 16V
CQ05	24590563	PF, 0.056μF
CQ07	24591203	PF, 0.02μF
CQ08	24590683	PF, 0.068μF
CQ09	24797229	EL, 2.2μF, ±20%, 50V
CQ10	24590223	PF, 0.022μF
CQ11	24797229	EL, 2.2μF, ±20%, 50V
CQ12	24436820	CD, 82pF
CQ13	24797010	EL, 1μF, ±20%, 50V
CQ14	24797010	EL, 1μF, ±20%, 50V
CQ15	24794101	EL, 100μF, ±20%, 16V
CQ16	24232103	CD, 0.01μF, +80%, -20%
CQ17	24353150	CD, 15pF, CH
CQ18	24436820	CD, 82pF
CQ19	24590103	PF, 0.01μF
CQ20	24567104	PF, 0.1μF
CQ21	24794470	EL, 47μF, ±20%, 16V
CQ22	24232103	CD, 0.01μF, +80%, -20%
CQ23	24567104	PF, 0.1μF
CQ24	24567104	PF, 0.1μF
CQ25	24797100	EL, 10μF, ±20%, 50V
CQ26	24567104	PF, 0.1μF
CQ27	24567104	PF, 0.1μF
CQ28	24797478	EL, 0.47μF, ±20%, 50V
CQ29	24794101	EL, 100μF, ±20%, 16V
CQ30	24232103	CD, 0.01μF, +80%, -20%
CQ31	24797478	EL, 0.47μF, ±20%, 50V
CQ32	24590103	PF, 0.01μF
CQ33	24567104	PF, 0.1μF
CQ34	24567104	PF, 0.1μF
CQ35	24206478	EL, 0.47μF, ±20%, 50V
CQ36	24206478	EL, 0.47μF, ±20%, 50V
CQ37	24797010	EL, 1μF, ±20%, 50V
CQ38	24797010	EL, 1μF, ±20%, 50V
CQ39	24797010	EL, 1μF, ±20%, 50V
CQ40	24436820	CD, 82pF
CQ41	24436090	CD, 9pF
CQ42	24436090	CD, 9pF
CQ43	24436090	CD, 9pF
CQ44	24232103	CD, 0.01μF, +80%, -20%
CQ45	24232103	CD, 0.01μF, +80%, -20%
CQ46	24232103	CD, 0.01μF, +80%, -20%
CQ47	24436470	CD, 47pF
CQ48	24436470	CD, 47pF
CR01	24567104	PF, 0.1μF
CR02	24567104	PF, 0.1μF
CR03	24567104	PF, 0.1μF
CR05	24232103	CD, 0.01μF, +80%, -20%
CR06	24666100	EL, 10μF, ±20%, 16V
CR12	24567104	PF, 0.1μF
CR12	24666100	EL, 10μF, ±20%, 16V
CR13	24567104	PF, 0.1μF
CR14	24567104	PF, 0.1μF
CR15	24617024	EL, 470μF, ±20%, 16V
CR16	24436470	CD, 47pF
CR17	24206108	EL, 0.1μF, ±20%, 50V
CR18	24206108	EL, 0.1μF, ±20%, 50V
CR19	24206108	EL, 0.1μF, ±20%, 50V
CR90	24232103	CD, 0.01μF, +80%, -20%
CS01	24206010	EL, 1μF, ±20%, 50V
CS02	24206010	EL, 1μF, ±20%, 50V
CS03	24085988	EL, 1.0μF, ±20%, 50V, Non-Polar
CS05	24206010	EL, 1μF, ±20%, 50V
CS06	24206010	EL, 1μF, ±20%, 50V
CS07	24206010	EL, 1μF, ±20%, 50V
CS08	24206010	EL, 1μF, ±20%, 50V
CS09	24206010	EL, 1μF, ±20%, 50V
CS10	24206010	EL, 1μF, ±20%, 50V
CS11	24232103	CD, 0.01μF, +80%, -20%
CS21	24212152	CD, 1500pF, ±10%
CS22	24212152	CD, 1500pF, ±10%
CS23	24206478	EL, 0.47μF, ±20%, 50V
CS32	24203100	EL, 10μF, ±20%, 16V
CS33	24203100	EL, 10μF, ±20%, 16V
CS601	24794100	EL, 10μF, ±20%, 16V
CS602	24794100	EL, 10μF, ±20%, 16V
CS670	24669100	EL, 10μF, ±20%, 50V
CS671	24669100	EL, 10μF, ±20%, 50V
CS672	24212101	CD, 100pF, ±10%
CS673	24212102	CD, 1000pF, ±10%
CS674	24669100	EL, 10μF, ±20%, 50V
CS675	24669100	EL, 10μF, ±20%, 50V
CS676	24669100	EL, 10μF, ±20%, 50V
CS677	24668221	EL, 220μF, ±20%, 35V
CS678	24206229	EL, 2.2μF, ±20%, 50V
CT01	24794221	EL, 220μF, ±20%, 16V
CT02	24474102	CD, 1000pF, ±10%
CT03	24232103	CD, 0.01μF, +80%, -20%
CT04	24794101	EL, 100μF, ±20%, 16V
CT05	24567104	PF, 0.1μF
CT06	24794470	EL, 47μF, ±20%, 16V
CT07	24794100	EL, 10μF, ±20%, 16V
CT08	24353560	CD, 56pF, CH
CT09	24353560	CD, 56pF, CH
CT10	24794470	EL, 47μF, ±20%, 16V
CT11	24567104	PF, 0.1μF
CT12	24794470	EL, 47μF, ±20%, 16V
CT13	24567104	PF, 0.1μF
CT14	24567104	PF, 0.1μF
CT17	24567104	PF, 0.1μF
CT20	24474102	CD, 1000pF, ±10%
CT21	24666100	EL, 10μF, ±20%, 16V
CV01	24232103	CD, 0.01μF, +80%, -20%
CV02	24203100	EL, 10μF, ±20%, 16V
CV03	24203100	EL, 10μF, ±20%, 16V
CV04	24203100	EL, 10μF, ±20%, 16V
CV05	24232103	CD, 0.01μF, +80%, -20%
CV06	24203100	EL, 10μF, ±20%, 16V
CV07	24763471	EL, 470μF, ±20%, 16V
CV08	24763471	EL, 470μF, ±20%, 16V
CV09	24203100	EL, 10μF, ±20%, 16V
CV10	24203100	EL, 10μF, ±20%, 16V

Location No.	Part No.	Description
CV12	24232103	CD, 0.01μF, +80%, -20%
CV13	24232103	CD, 0.01μF, +80%, -20%
CV27	24763471	EL, 470μF, ±20%, 16V
CV29	24763101	EL, 100μF, ±20%, 16V
CV30	24232103	CD, 0.01μF, +80%, -20%
CV31	24212102	CD, 1000pF, ±10%
CV40	24763101	EL, 100μF, ±20%, 16V
CV41	24232103	CD, 0.01μF, +80%, -20%
CV42	24085929	EL, 33μF, ±20%, 16V, Non-Polar
CV43	24436820	CD, 82pF
CV43A	24436090	CD, 9pF
CV44	24436101	CD, 100pF
CV46	24203470	EL, 47μF, ±20%, 16V
CV46	24232103	CD, 0.01μF, +80%, -20%
CV47	24232103	CD, 0.01μF, +80%, -20%
CV48	24232103	CD, 0.01μF, +80%, -20%
CV53	24474102	CD, 1000pF, ±10%
CV54	24436330	CD, 33pF
CV70	24436330	CD, 33pF
CV140	24206010	EL, 1μF, ±20%, 50V
CV502	24203100	EL, 10μF, ±20%, 16V
CV503	24203100	EL, 10μF, ±20%, 16V
CV504	24203100	EL, 10μF, ±20%, 16V
CV506	24763471	EL, 470μF, ±20%, 16V
CV507	24203100	EL, 10μF, ±20%, 16V
CW04	24591822	PF, 8200pF
CW05	24212103	CD, 0.01μF, ±10%
CW07	24666470	EL, 47μF, ±20%, 16V
CW12	24666470	EL, 47μF, ±20%, 16V
CW13	24790100	EL, 10μF, ±20%, 160V
CW14	24436101	CD, 100pF
CW15	24214472	CD, 4700pF, ±10%, 500V
CW16	24436101	CD, 100pF
CW17	24214472	CD, 4700pF, ±10%, 500V
CW18	24666470	EL, 47μF, ±20%, 16V
CW19	24435560	CD, 56pF, 500V
CW20	24790100	EL, 10μF, ±20%, 160V
CW21	24794470	EL, 47μF, ±20%, 16V
CW26	24212102	CD, 1000pF, ±10%
CY02	24567104	PF, 0.1μF
CY03	24436220	CD, 22pF
CY601	24794101	EL, 100μF, ±20%, 16V
CY602	24797479	EL, 4.7μF, ±20%, 50V
CY603	24797479	EL, 4.7μF, ±20%, 50V
CY604	24794102	EL, 1000μF, ±20%, 16V
CY605	24797479	EL, 4.7μF, ±20%, 50V
CY606	24797479	EL, 4.7μF, ±20%, 50V
CY608	24794101	EL, 100μF, ±20%, 16V
CZ03	24085948	EL, 0.47μF, ±20%, 50V, Non-Polar
CZ05	24232103	CD, 0.01μF, +80%, -20%
CZ07	24591104	PF, 0.1μF
CZ09	24436220	CD, 22pF
CZ10	24436100	CD, 10pF
CZ11	24436220	CD, 22pF
CZ12	24232103	CD, 0.01μF, +80%, -20%
CZ13	24232103	CD, 0.01μF, +80%, -20%
CZ14	24203100	EL, 10μF, ±20%, 16V
CZ17	24232103	CD, 0.01μF, +80%, -20%
CZ19	24436181	CD, 180pF
CZ20	24232103	CD, 0.01μF, +80%, -20%
CZ21	24212122	CD, 1200pF, ±10%
CZ22	24203100	EL, 10μF, ±20%, 16V

Location No.	Part No.	Description
CZ23	24232103	CD, 0.01μF, +80%, -20%
CZ24	24232103	CD, 0.01μF, +80%, -20%
CZ25	24203100	EL, 10μF, ±20%, 16V
CZ26	24232103	CD, 0.01μF, +80%, -20%
CZ28	24232103	CD, 0.01μF, +80%, -20%
CZ29	24232103	CD, 0.01μF, +80%, -20%
CZ30	24203100	EL, 10μF, ±20%, 16V
CZ31	24591104	PF, 0.1μF
CZ32	24436470	CD, 47pF
CZ33	24436470	CD, 47pF
CZ34	24436470	CD, 47pF
CZ35	24436470	CD, 47pF
CZ37	24591104	PF, 0.1μF
CZ38	24591104	PF, 0.1μF
CZ45	24436100	CD, 10pF

RESISTORS

Location No.	Part No.	Description
R101	24382153	OMF, 15k ohm, 1W
R110	24366104	CF, 100k ohm
R111	24366683	CF, 68k ohm
R112	24366683	CF, 68k ohm
R113	24366104	CF, 100k ohm
R201	24366821	CF, 820 ohm
R202	24366102	CF, 1k ohm
R204	24366104	CF, 100k ohm
R205	24366101	CF, 100 ohm
R206	24366102	CF, 1k ohm
R207	24366101	CF, 100 ohm
R208	24366101	CF, 100 ohm
R209	24366101	CF, 100 ohm
R212	24366472	CF, 4700 ohm
R213	24366122	CF, 1200 ohm
R214	24366222	CF, 2200 ohm
R216	24366103	CF, 10k ohm
R217	24366102	CF, 1k ohm
R218	24366103	CF, 10k ohm
R223	24366102	CF, 1k ohm
R227	24366103	CF, 10k ohm
R230	24366562	CF, 5600 ohm
R260	24366153	CF, 15k ohm
R261	24366682	CF, 6800 ohm
R266	24366102	CF, 1k ohm
R267	24366102	CF, 1k ohm
R268	24366681	CF, 680 ohm
R269	24366102	CF, 1k ohm
R270	24366682	CF, 6800 ohm
R301	24366102	CF, 1k ohm
R303	24321129	MF, 1.2 ohm, 1/2W
R304	24366223	CF, 22k ohm
R305	24322828	MF, 0.82 ohm, 1W
R306	24366563	CF, 56k ohm
R307	24366224	CF, 220k ohm
R308	24382391	OMF, 390 ohm, 1W
R310	24366102	CF, 1k ohm
R310	24366472	CF, 4700 ohm
R313	24366153	CF, 15k ohm
R314	24366105	CF, 1M ohm
R315	24366102	CF, 1k ohm
R317	24366104	CF, 100k ohm
R318	24366471	CF, 470 ohm
R319	24366471	CF, 470 ohm
R320	24366101	CF, 100 ohm
R321	24366103	CF, 10k ohm
R322	24366102	CF, 1k ohm

Location No.	Part No.	Description
R323	24366102	CF, 1k ohm
R324	24366333	CF, 33k ohm
R327	24000187	FR, 3.3 ohm, 1W
R329	24366153	CF, 15k ohm
R330	24366102	CF, 1k ohm
R334	24366102	CF, 1k ohm
R336	24383221	OMF, 220 ohm, 2W
R341	24366562	CF, 5600 ohm
R343	24366153	CF, 15k ohm
R345	24366102	CF, 1k ohm
R346	24366754	CF, 750k ohm
R347	24366184	CF, 180k ohm
R350	24366222	CF, 2200 ohm
R351	24366823	CF, 82k ohm
R352	24366104	CF, 100k ohm
R353	24382101	OMF, 100 ohm, 1W
R354	24366472	CF, 4700 ohm
R356	24366823	CF, 82k ohm
R357	24366302	CF, 3k ohm
R359	24366472	CF, 4700 ohm
R360	24366102	CF, 1k ohm
R361	24366113	CF, 11k ohm
R362	24366682	CF, 6800 ohm
R363	24366103	CF, 10k ohm
R364	24366103	CF, 10k ohm
R365	24366103	CF, 10k ohm
R366	24366103	CF, 10k ohm
R367	24366752	CF, 7500 ohm
R368	24366123	CF, 12k ohm
R369	24366682	CF, 6800 ohm
R370	24321159	MF, 1.5 ohm, 1/2W
R371	24366682	CF, 6800 ohm
R372	24366472	CF, 4700 ohm
R373	24366152	CF, 1500 ohm
R374	24366473	CF, 47k ohm
R375	24366102	CF, 1k ohm
R380	24366562	CF, 5600 ohm
R381	24366222	CF, 2200 ohm
R382	24377224	CF, 220k ohm, 1W
R389	24366222	CF, 2200 ohm
R390	24553391	OMF, 390 ohm, 1W
R391	24553391	OMF, 390 ohm, 1W
R392	24553391	OMF, 390 ohm, 1W
R396	24366682	CF, 6800 ohm
R397	24366153	CF, 15k ohm
R398	24366822	CF, 8200 ohm
R400	24942102	CC, 1k ohm, 1/2W
R401	24366391	CF, 390 ohm
R402	24366103	CF, 10k ohm
R403	24366302	CF, 3k ohm
R405	24382562	OMF, 5600 ohm, 1W
R407	24366103	CF, 10k ohm
R408	24366223	CF, 22k ohm
R409	24552103	OMF, 10k ohm, 1/2W
R410	24366331	CF, 330 ohm
R411	24366471	CF, 470 ohm
R413	24366334	CF, 330k ohm
R414	24383270	OMF, 27 ohm, 2W
R415	24553272	OMF, 2700 ohm, 1W
R416	24510562	Cement, 5600 ohm, 5W
R424	24546338	FR, 0.33 ohm, 1/2W
R425	24552331	OMF, 330 ohm, 1/2W
R426	24366152	CF, 1500 ohm
R427	24366822	CF, 8200 ohm

Location No.	Part No.	Description
R428	24366561	CF, 560 ohm
R429	24552330	OMF, 33 ohm, 1/2W
R431	24382100	OMF, 10 ohm, 1W
R432	24532560	FR, 56 ohm, 1W
R434	24366102	CF, 1k ohm
R435	24366333	CF, 33k ohm
R436	24327224	MF, 220k ohm, ±1%, 1/4W
R437	24321209	MF, 2 ohm, 1/2W
R439	24366472	CF, 4700 ohm
R441	24383102	OMF, 1k ohm, 2W
R442	24366472	CF, 4700 ohm
R443	24310109	MF, 1.0 ohm, 1/2W
R443	24366472	CF, 4700 ohm
R444	24338398	MF, 0.39 ohm, 1W
R445	24553682	OMF, 6800 ohm, 1W
R446	24553682	OMF, 6800 ohm, 1W
R447	24382473	OMF, 47k ohm, 1W
R448	24338828	MF, 0.82 ohm, 1W
R450	24066879	VR, 1k ohm, 0.3W
R451	24376223	CF, 22k ohm, 1/2W
R452	24376223	CF, 22k ohm, 1/2W
R453	24376223	CF, 22k ohm, 1/2W
R454	24366223	CF, 22k ohm
R455	24367333	CF, 33k ohm, ±2%
R458	24366823	CF, 82k ohm
R459	24367273	CF, 27k ohm, ±2%
R460	24552332	OMF, 3300 ohm, 1/2W
R461	24552332	OMF, 3300 ohm, 1/2W
R462	24367103	CF, 10k ohm, ±2%
R463	24339109	MF, 1 ohm, 2W
R464	24366273	CF, 27k ohm
R465	24366114	CF, 110k ohm
R466	24366152	CF, 1500 ohm
R467	24366102	CF, 1k ohm
R468	24366333	CF, 33k ohm
R469	24000465	FR, 9.1 ohm, 1W
R472	24552270	OMF, 27 ohm, 1/2W
R477	24383121	OMF, 120 ohm, 2W
R478	24376333	CF, 33k ohm, 1/2W
R480	24382272	OMF, 2700 ohm, 1W
R481	24366473	CF, 47k ohm
R482	24366103	CF, 10k ohm
R483	24366154	CF, 150k ohm
R484	24366473	CF, 47k ohm
R485	24381271	OMF, 270 ohm, 1/2W
R487	24366472	CF, 4700 ohm
R488	24366474	CF, 470k ohm
R489	24366332	CF, 3300 ohm
R490	24366332	CF, 3300 ohm
R491	24366912	CF, 9100 ohm
R492	24366102	CF, 1k ohm
R493	24552392	OMF, 3900 ohm, 1/2W
R494	24366183	CF, 18k ohm
R495	24366682	CF, 6800 ohm
R496	24366821	CF, 820 ohm
R498	24366153	CF, 15k ohm
R499	24366821	CF, 820 ohm
R501	24366223	CF, 22k ohm
R502	24366101	CF, 100 ohm
R503	24366101	CF, 100 ohm
R504	24366101	CF, 100 ohm
R505	24366102	CF, 1k ohm
R506	24366103	CF, 10k ohm
R508	24366102	CF, 1k ohm

Location No.	Part No.	Description
R509	24366102	CF, 1k ohm
R510	24366102	CF, 1k ohm
R511	24366101	CF, 100 ohm
R512	24366101	CF, 100 ohm
R514	24366101	CF, 100 ohm
R515	24366102	CF, 1k ohm
R516	24366101	CF, 100 ohm
R517	24366102	CF, 1k ohm
R518	24366101	CF, 100 ohm
R519	24366102	CF, 1k ohm
R520	24366103	CF, 10k ohm
R521	24366223	CF, 22k ohm
R522	24366473	CF, 47k ohm
R523	24366101	CF, 100 ohm
R524	24366101	CF, 100 ohm
R525	24366102	CF, 1k ohm
R526	24366102	CF, 1k ohm
R527	24366102	CF, 1k ohm
R528	24366223	CF, 22k ohm
R529	24366103	CF, 10k ohm
R530	24366101	CF, 100 ohm
R531	24366103	CF, 10k ohm
R532	24366101	CF, 100 ohm
R533	24366103	CF, 10k ohm
R534	24366101	CF, 100 ohm
R535	24366102	CF, 1k ohm
R536	24366102	CF, 1k ohm
R537	24366101	CF, 100 ohm
R538	24366103	CF, 10k ohm
R539	24366223	CF, 22k ohm
R540	24366101	CF, 100 ohm
R541	24366472	CF, 4700 ohm
R542	24366472	CF, 4700 ohm
R601	24366562	CF, 5600 ohm
R602	24366562	CF, 5600 ohm
R603	24366272	CF, 2700 ohm
R604	24366272	CF, 2700 ohm
R609	24366229	CF, 2.2 ohm
R610	24366229	CF, 2.2 ohm
R611	24366822	CF, 8200 ohm
R612	24366822	CF, 8200 ohm
R615	24366331	CF, 330 ohm
R616	24366224	CF, 220k ohm
R617	24366103	CF, 10k ohm
R666	24366223	CF, 22k ohm
R680	24366473	CF, 47k ohm
R681	24366103	CF, 10k ohm
R682	24366683	CF, 68k ohm
R683	24366223	CF, 22k ohm
R684	24366223	CF, 22k ohm
R685	24366103	CF, 10k ohm
R687	24366103	CF, 10k ohm
R688	24366224	CF, 220k ohm
R688	24552391	OMF, 390 ohm, 1/2W
R689	24366103	CF, 10k ohm
R690	24552391	OMF, 390 ohm, 1/2W
R730	24366104	CF, 100k ohm
R731	24366103	CF, 10k ohm
R732	24366473	CF, 47k ohm
R733	24366473	CF, 47k ohm
R792	24366473	CF, 47k ohm
R793	24366473	CF, 47k ohm
R795	24366472	CF, 4700 ohm
R796	24366682	CF, 6800 ohm

Location No.	Part No.	Description
⚠R801	24009954	Metal-Glazed Resistor, 2.2M ohm, 1/2W
⚠R802	24009954	Metal-Glazed Resistor, 2.2M ohm, 1/2W
R803	24555223	OMF, 15k ohm, 3W
R804	24545109	FR, 1 ohm, 1/4W
R805	24366101	CF, 100 ohm
R806	24007061	Cement, 1.8 ohm, ±10%, 2W
R807	24510479	Cement, 4.7 ohm, 5W
R808	24366472	CF, 4700 ohm
R809	24366102	CF, 1k ohm
R811	24366820	CF, 82 ohm
R812	24381153	OMF, 15k ohm, 1/2W
R813	24366182	CF, 1800 ohm
R814	24366122	CF, 1200 ohm
R815	24552561	OMF, 560 ohm, 1/2W
R816	24322689	MF, 6.8 ohm, 1W
R817	24366471	CF, 470 ohm
R818	24322278	MF, 0.27 ohm, 1W
R819	24321568	MF, 0.56 ohm, 1/2W
R821	24366101	CF, 100 ohm
R822	24321568	MF, 0.56 ohm, 1/2W
R825	24366153	CF, 15k ohm
R827	24366102	CF, 1k ohm
R828	24366562	CF, 5600 ohm
R829	24322278	MF, 0.27 ohm, 1W
R830	24569181	Cement, 180 ohm, 10W
R831	24554152	OMF, 1500 ohm, 2W
R832	24383152	OMF, 1500 ohm, 2W
R833	24366103	CF, 10k ohm
R836	24554331	OMF, 330 ohm, 2W
R837	24327223	MF, 22k ohm, ±1%, 1/4W
R837	24545109	FR, 1 ohm, 1/4W
R838	24366682	CF, 6800 ohm
R839	24327682	MF, 6800 ohm, ±1%, 1/4W
R840	24366392	CF, 3900 ohm
R840	24366681	CF, 680 ohm
R841	24366682	CF, 6800 ohm
R842	24381391	OMF, 390 ohm, 1/2W
R843	24552561	OMF, 560 ohm, 1/2W
R844	24366223	CF, 22k ohm
R844	24366471	CF, 470 ohm
R845	24338568	MF, 0.56 ohm, 1W
R846	24381301	OMF, 300 ohm, 1/2W
R847	24366103	CF, 10k ohm
R847	24381750	OMF, 75 ohm, 1/2W
R849	24366103	CF, 10k ohm
R851	24545109	FR, 1 ohm, 1/4W
R861	24569229	Cement, 2.2 ohm, 10W
R862	24555223	OMF, 15k ohm, 3W
R863	24382120	OMF, 12 ohm, 1W
R864	24366101	CF, 100 ohm
R865	24339518	MF, 0.51 ohm, 2W
R866	24552561	OMF, 560 ohm, 1/2W
R867	24321688	MF, 0.68 ohm, 1/2W
R868	24552103	OMF, 10k ohm, 1/2W
R869	24366272	CF, 2700 ohm
R870	24366122	CF, 1200 ohm
R871	24366272	CF, 2700 ohm
R872	24366392	CF, 3900 ohm
R875	24366103	CF, 10k ohm
R879	24366102	CF, 1k ohm
R882	24366472	CF, 4700 ohm
R883	24366472	CF, 4700 ohm

Location No.	Part No.	Description
R884	24366472	CF, 4700 ohm
R885	24366472	CF, 4700 ohm
R886	24366472	CF, 4700 ohm
R887	24552162	OMF, 1600 ohm, 1/2W
R888	24366471	CF, 470 ohm
R890	24382333	OMF, 33k ohm, 1W
R891	24552820	OMF, 82 ohm, 1/2W
R892	24552391	OMF, 390 ohm, 1/2W
R893	24552561	OMF, 560 ohm, 1/2W
R894	24366562	CF, 5600 ohm
R895	24531120	FR, 12 ohm, 1/2W
R896	24366102	CF, 1k ohm
R897	24366101	CF, 100 ohm
R898	24366681	CF, 680 ohm
⚠R899	24005007	Metal-Glazed Resistor, 8.2M ohm, 1W
R899A	23160994	Terminal, 1P
R901	24366101	CF, 100 ohm
R903	24942102	CC, 1k ohm, 1/2W
R904	24366102	CF, 1k ohm
R905	24366910	CF, 91 ohm
R906	24366471	CF, 470 ohm
R908	24366430	CF, 43 ohm
R909	24366121	CF, 120 ohm
R911	24366101	CF, 100 ohm
R913	24942102	CC, 1k ohm, 1/2W
R914	24366102	CF, 1k ohm
R915	24366820	CF, 82 ohm
R916	24366471	CF, 470 ohm
R918	24366430	CF, 43 ohm
R921	24366101	CF, 100 ohm
R923	24942102	CC, 1k ohm, 1/2W
R924	24366102	CF, 1k ohm
R925	24366820	CF, 82 ohm
R926	24366471	CF, 470 ohm
R928	24366430	CF, 43 ohm
R931	24555153	OMF, 15k ohm, 3W
R932	24555153	OMF, 15k ohm, 3W
R933	24000929	FR, 1.5 ohm, 1W
R936	24366330	CF, 33 ohm
R938	24366471	CF, 470 ohm
R940	24366331	CF, 330 ohm
R941	24555153	OMF, 15k ohm, 3W
R942	24555153	OMF, 15k ohm, 3W
R943	24366103	CF, 10k ohm
R944	24366120	CF, 12 ohm
R945	24366560	CF, 56 ohm
R946	24366330	CF, 33 ohm
R947	24366561	CF, 560 ohm
R949	24366910	CF, 91 ohm
R951	24555153	OMF, 15k ohm, 3W
R952	24555153	OMF, 15k ohm, 3W
R953	24366910	CF, 91 ohm
R956	24366271	CF, 270 ohm
R957	24366330	CF, 33 ohm
R961	24366821	CF, 820 ohm
R962	24366391	CF, 390 ohm
R963	24366222	CF, 2200 ohm
R964	24366332	CF, 3300 ohm
R965	24366471	CF, 470 ohm
R966	24366821	CF, 820 ohm
R967	24366122	CF, 1200 ohm
R968	24366680	CF, 68 ohm
R969	24366103	CF, 10k ohm
R970	24366222	CF, 2200 ohm
R971	24367152	CF, 1500 ohm, ±2%
R972	24367471	CF, 470 ohm, ±2%
R973	24367681	CF, 680 ohm, ±2%
R974	24367681	CF, 680 ohm, ±2%
R975	24366242	CF, 2400 ohm
R976	24367562	CF, 5600 ohm, ±2%
R977	24367682	CF, 6800 ohm, ±2%
R978	24367681	CF, 680 ohm, ±2%
R993	24366222	CF, 2200 ohm
R994	24366272	CF, 2700 ohm
R995	24366102	CF, 1k ohm
R996	24366103	CF, 10k ohm
R997	24366332	CF, 3300 ohm
R998	24366102	CF, 1k ohm
R999	24366102	CF, 1k ohm
R7707	24366472	CF, 4700 ohm
R7708	24366472	CF, 4700 ohm
R7710	24555680	OMF, 68 ohm, 3W
R7711	24323229	MF, 2.2 ohm, 2W
R7712	24366472	CF, 4700 ohm
R7713	24366472	CF, 4700 ohm
R7715	24555680	OMF, 68 ohm, 3W
R7716	24323229	MF, 2.2 ohm, 2W
R7717	24366472	CF, 4700 ohm
R7718	24366472	CF, 4700 ohm
R7720	24555680	OMF, 68 ohm, 3W
R7721	24323229	MF, 2.2 ohm, 2W
R7722	24366472	CF, 4700 ohm
R7723	24366472	CF, 4700 ohm
R7725	24555680	OMF, 68 ohm, 3W
R7726	24323229	MF, 2.2 ohm, 2W
R7727	24366472	CF, 4700 ohm
R7728	24366472	CF, 4700 ohm
R7730	24555680	OMF, 68 ohm, 3W
R7731	24323229	MF, 2.2 ohm, 2W
R7732	24366472	CF, 4700 ohm
R7733	24366472	CF, 4700 ohm
R7735	24555680	OMF, 68 ohm, 3W
R7736	24323229	MF, 2.2 ohm, 2W
R7738	24383101	OMF, 100 ohm, 2W
R7741	24366102	CF, 1k ohm
R7742	24366102	CF, 1k ohm
R7743	24366223	CF, 22k ohm
R7744	24366102	CF, 1k ohm
R7745	24366152	CF, 1500 ohm
R7746	24366223	CF, 22k ohm
R7747	24366222	CF, 2200 ohm
R7749	24366331	CF, 330 ohm
R7750	24323278	MF, 0.27 ohm, 2W
R7751	24366471	CF, 470 ohm
R7757	24366223	CF, 22k ohm
R7758	24366222	CF, 2200 ohm
R7763	24366471	CF, 470 ohm
R7764	24366331	CF, 330 ohm
R7765	24339398	MF, 0.39 ohm, 2W
R7766	24366223	CF, 22k ohm
R7767	24366223	CF, 22k ohm
R7768	24366102	CF, 1k ohm
R7770	24366222	CF, 2200 ohm
R7771	24366102	CF, 1k ohm
R7772	24366102	CF, 1k ohm
R7775	24366273	CF, 27k ohm
R7776	24366472	CF, 4700 ohm

Location No.	Part No.	Description
R7777	24366273	CF, 27k ohm
R7778	24366472	CF, 4700 ohm
R7779	24366102	CF, 1k ohm
R7780	24366102	CF, 1k ohm
R7781	24366333	CF, 33k ohm
R7782	24339828	MF, 0.82 ohm, 2W
R7783	24366331	CF, 330 ohm
R7784	24366471	CF, 470 ohm
R7785	24366222	CF, 2200 ohm
R7786	24366103	CF, 10k ohm
R7787	24366104	CF, 100k ohm
R7788	24366103	CF, 10k ohm
R7789	24366471	CF, 470 ohm
R7790	24552182	OMF, 1800 ohm, 1/2W
R7791	24552681	OMF, 680 ohm, 1/2W
R7792	24366471	CF, 470 ohm
R7801	24366472	CF, 4700 ohm
R7802	24366103	CF, 10k ohm
R7803	24366103	CF, 10k ohm
R7804	24366101	CF, 100 ohm
R7805	24366101	CF, 100 ohm
R7806	24366101	CF, 100 ohm
R7807	24366102	CF, 1k ohm
R7808	24366104	CF, 100k ohm
R8701	24554391	OMF, 390 ohm, 2W
R9601	24366471	CF, 470 ohm
R9602	24366472	CF, 4700 ohm
R9603	24366392	CF, 3900 ohm
R9604	24366272	CF, 2700 ohm
R9605	24366103	CF, 10k ohm
R9606	24366512	CF, 5100 ohm
R9613	24366470	CF, 47 ohm
R9614	24366560	CF, 56 ohm
R9615	24366101	CF, 100 ohm
R9616	24366102	CF, 1k ohm
R9617	24366151	CF, 150 ohm
R9701	24366102	CF, 1k ohm
R9702	24366332	CF, 3300 ohm
R9703	24366822	CF, 8200 ohm
R9704	24366103	CF, 10k ohm
R9705	24366103	CF, 10k ohm
R9706	24366271	CF, 270 ohm
R9707	24366271	CF, 270 ohm
R9708	24366102	CF, 1k ohm
RA01	24366470	CF, 47 ohm
RA02	24366272	CF, 2700 ohm
RA03	24366102	CF, 1k ohm
RA04	24366102	CF, 1k ohm
RA05	24366102	CF, 1k ohm
RA06	24366102	CF, 1k ohm
RA07	24366102	CF, 1k ohm
RA08	24366102	CF, 1k ohm
RA09	24366102	CF, 1k ohm
RA10	24366103	CF, 10k ohm
RA13	24366682	CF, 6800 ohm
RA15	24366102	CF, 1k ohm
RA16	24366102	CF, 1k ohm
RA17	24366102	CF, 1k ohm
RA18	24366102	CF, 1k ohm
RA22	24366472	CF, 4700 ohm
RA23	24366472	CF, 4700 ohm
RA24	24366472	CF, 4700 ohm
RA25	24366182	CF, 1800 ohm
RA26	24366102	CF, 1k ohm
RA27	24366102	CF, 1k ohm
RA28	24366102	CF, 1k ohm
RA29	24366102	CF, 1k ohm
RA30	24366102	CF, 1k ohm
RA31	24366392	CF, 3900 ohm
RA32	24366223	CF, 22k ohm
RA33	24366103	CF, 10k ohm
RA34	24366102	CF, 1k ohm
RA35	24366102	CF, 1k ohm
RA36	24366472	CF, 4700 ohm
RA37	24366101	CF, 100 ohm
RA38	24366101	CF, 100 ohm
RA40	24366331	CF, 330 ohm
RA41	24366331	CF, 330 ohm
RA61	24366103	CF, 10k ohm
RA62	24366103	CF, 10k ohm
RA67	24366273	CF, 27k ohm
RA68	24366273	CF, 27k ohm
RA70	24366333	CF, 33k ohm
RA71	24366683	CF, 68k ohm
RA72	24366223	CF, 22k ohm
RA73	24366103	CF, 10k ohm
RA75	24366333	CF, 33k ohm
RA76	24366102	CF, 1k ohm
RA76	24366103	CF, 10k ohm
RA77	24366223	CF, 22k ohm
RA79	24366332	CF, 3300 ohm
RA80	24366332	CF, 3300 ohm
RA86	24366101	CF, 100 ohm
RA87	24366101	CF, 100 ohm
RA061	24366103	CF, 10k ohm
RA071	24366103	CF, 10k ohm
RA151	24366333	CF, 33k ohm
RB01	24366271	CF, 270 ohm
RB02	24366221	CF, 220 ohm
RB03	24366101	CF, 100 ohm
RB04	24366223	CF, 22k ohm
RB05	24366471	CF, 470 ohm
RB09	24366470	CF, 47 ohm
RB11	24366103	CF, 10k ohm
RB40	24366103	CF, 10k ohm
RB41	24366821	CF, 820 ohm
RB42	24366153	CF, 15k ohm
RB43	24366103	CF, 10k ohm
RB44	24366103	CF, 10k ohm
RB45	24366101	CF, 100 ohm
RB46	24366122	CF, 1200 ohm
RB47	24366123	CF, 12k ohm
RB48	24366123	CF, 12k ohm
RB49	24366562	CF, 5600 ohm
RB50	24366392	CF, 3900 ohm
RB51	24366473	CF, 47k ohm
RB52	24366271	CF, 270 ohm
RB53	24366271	CF, 270 ohm
RB54	24366222	CF, 2200 ohm
RB55	24366222	CF, 2200 ohm
RB56	24366102	CF, 1k ohm
RB81	24366122	CF, 1200 ohm
RB82	24366123	CF, 12k ohm
RB83	24366123	CF, 12k ohm
RB84	24366562	CF, 5600 ohm
RB90	24366392	CF, 3900 ohm
RB91	24366473	CF, 47k ohm
RB92	24366271	CF, 270 ohm

Location No.	Part No.	Description
RB93	24366271	CF, 270 ohm
RB94	24366222	CF, 2200 ohm
RB95	24366222	CF, 2200 ohm
RB98	24366102	CF, 1k ohm
RC27	24366102	CF, 1k ohm
RD80	24366822	CF, 8200 ohm
RD82	24366472	CF, 4700 ohm
RD83	24366102	CF, 1k ohm
RG01	24366333	CF, 33k ohm
RG02	24366333	CF, 33k ohm
RG03	24366101	CF, 100 ohm
RG04	24366101	CF, 100 ohm
RG05	24366101	CF, 100 ohm
RG06	24366101	CF, 100 ohm
RG09	24366472	CF, 4700 ohm
RG10	24366822	CF, 8200 ohm
RG11	24366472	CF, 4700 ohm
RG12	24366822	CF, 8200 ohm
RG15	24366102	CF, 1k ohm
RG16	24366223	CF, 22k ohm
RG20	24366103	CF, 10k ohm
RG21	24366103	CF, 10k ohm
RG25	24366101	CF, 100 ohm
RQ01	24366102	CF, 1k ohm
RQ02	24366475	CF, 4.7M ohm
RQ03	24366102	CF, 1k ohm
RQ04	24366511	CF, 510 ohm
RQ05	24366471	CF, 470 ohm
RQ06	24366471	CF, 470 ohm
RQ07	24366103	CF, 10k ohm
RQ08	24366102	CF, 1k ohm
RQ09	24366102	CF, 1k ohm
RQ10	24366102	CF, 1k ohm
RQ11	24366561	CF, 560 ohm
RQ12	24366561	CF, 560 ohm
RQ13	24366203	CF, 20k ohm
RQ14	24366273	CF, 27k ohm
RQ20	24366563	CF, 56k ohm
RR01	24366472	CF, 4700 ohm
RR02	24366472	CF, 4700 ohm
RR03	24366472	CF, 4700 ohm
RR12	24366223	CF, 22k ohm
RR17	24366102	CF, 1k ohm
RR18	24366102	CF, 1k ohm
RR21	24366103	CF, 10k ohm
RR22	24366222	CF, 2200 ohm
RR23	24366101	CF, 100 ohm
RR24	24366332	CF, 3300 ohm
RR25	24366332	CF, 3300 ohm
RR26	24366332	CF, 3300 ohm
RR27	24366473	CF, 47k ohm
RR28	24366473	CF, 47k ohm
RR29	24366473	CF, 47k ohm
RR30	24366472	CF, 4700 ohm
RR31	24366270	CF, 27 ohm
RR33	24366472	CF, 4700 ohm
RR34	24366472	CF, 4700 ohm
RR35	24366472	CF, 4700 ohm
RR39	24366222	CF, 2200 ohm
RR40	24366223	CF, 22k ohm
RR41	24366103	CF, 10k ohm
RR50	24366222	CF, 2200 ohm
RR51	24366272	CF, 2700 ohm
RR82	24366101	CF, 100 ohm

Location No.	Part No.	Description
RR84	24366102	CF, 1k ohm
RR85	24366102	CF, 1k ohm
RR86	24366152	CF, 1500 ohm
RR87	24366102	CF, 1k ohm
RR88	24366152	CF, 1500 ohm
RR89	24366102	CF, 1k ohm
RR90	24366152	CF, 1500 ohm
RR100	24366332	CF, 3300 ohm
RR101	24366332	CF, 3300 ohm
RR102	24366332	CF, 3300 ohm
RR103	24366102	CF, 1k ohm
RS01	24366102	CF, 1k ohm
RS02	24366102	CF, 1k ohm
RS03	24366101	CF, 100 ohm
RS04	24366101	CF, 100 ohm
RS05	24366102	CF, 1k ohm
RS07	24366472	CF, 4700 ohm
RS08	24366472	CF, 4700 ohm
RS09	24366472	CF, 4700 ohm
RS10	24366472	CF, 4700 ohm
RS11	24366472	CF, 4700 ohm
RS12	24366472	CF, 4700 ohm
RS13	24366101	CF, 100 ohm
RS14	24366101	CF, 100 ohm
RS25	24366103	CF, 10k ohm
RS26	24366103	CF, 10k ohm
RS27	24366561	CF, 560 ohm
RS28	24366561	CF, 560 ohm
RS29	24366104	CF, 100k ohm
RS30	24366104	CF, 100k ohm
RS31	24366102	CF, 1k ohm
RS32	24366103	CF, 10k ohm
RS33	24366101	CF, 100 ohm
RS34	24366222	CF, 2200 ohm
RS35	24366101	CF, 100 ohm
RS36	24366222	CF, 2200 ohm
RS45	24366393	CF, 39k ohm
RS46	24366393	CF, 39k ohm
RS601	24366101	CF, 100 ohm
RS602	24366101	CF, 100 ohm
RS603	24366472	CF, 4700 ohm
RS604	24366472	CF, 4700 ohm
RS605	24366561	CF, 560 ohm
RS606	24366561	CF, 560 ohm
RS607	24366104	CF, 100k ohm
RS608	24366104	CF, 100k ohm
RS609	24366103	CF, 10k ohm
RS610	24366103	CF, 10k ohm
RS664	24366223	CF, 22k ohm
RS667	24366102	CF, 1k ohm
RS668	24366683	CF, 68k ohm
RS669	24366104	CF, 100k ohm
RS670	24552152	OMF, 1500 ohm, 1/2W
RS671	24366103	CF, 10k ohm
RS672	24366103	CF, 10k ohm
RS673	24366563	CF, 56k ohm
RS674	24366563	CF, 56k ohm
RS675	24366153	CF, 15k ohm
RS676	24366103	CF, 10k ohm
RS678	24366103	CF, 10k ohm
RS679	24366103	CF, 10k ohm
RS680	24366102	CF, 1k ohm
RS681	24366102	CF, 1k ohm
RT01	24366101	CF, 100 ohm

Location No.	Part No.	Description
RT02	24366101	CF, 100 ohm
RT03	24366102	CF, 1k ohm
RT04	24366102	CF, 1k ohm
RT05	24366100	CF, 10 ohm
RT09	24366332	CF, 3300 ohm
RT13	24366102	CF, 1k ohm
RT14	24366222	CF, 2200 ohm
RT15	24366333	CF, 33k ohm
RT16	24366103	CF, 10k ohm
RT17	24366561	CF, 560 ohm
RT18	24366152	CF, 1500 ohm
RT19	24366122	CF, 1200 ohm
RT27	24367243	CF, 24k ohm, ±2%
RT28	24366101	CF, 100 ohm
RT29	24366102	CF, 1k ohm
RT30	24366472	CF, 4700 ohm
RT31	24366472	CF, 4700 ohm
RT38	24366151	CF, 150 ohm
RT40	24366151	CF, 150 ohm
RT43	24366151	CF, 150 ohm
RV01	24366101	CF, 100 ohm
RV02	24366101	CF, 100 ohm
RV03	24366101	CF, 100 ohm
RV04	24366101	CF, 100 ohm
RV05	24366101	CF, 100 ohm
RV06	24366101	CF, 100 ohm
RV09	24366101	CF, 100 ohm
RV10	24366101	CF, 100 ohm
RV11	24366101	CF, 100 ohm
RV12	24366101	CF, 100 ohm
RV19	24366101	CF, 100 ohm
RV20	24366332	CF, 3300 ohm
RV35	24366103	CF, 10k ohm
RV37	24366750	CF, 75 ohm
RV40	24366822	CF, 8200 ohm
RV41	24366472	CF, 4700 ohm
RV42	24366471	CF, 470 ohm
RV43	24366471	CF, 470 ohm
RV44	24366821	CF, 820 ohm
RV45	24366151	CF, 150 ohm
RV46	24366102	CF, 1k ohm
RV47	24366102	CF, 1k ohm
RV48	24366102	CF, 1k ohm
RV49	24366102	CF, 1k ohm
RV60	24366682	CF, 6800 ohm
RV61	24366750	CF, 75 ohm
RV63	24366101	CF, 100 ohm
RV65	24366103	CF, 10k ohm
RV67	24366750	CF, 75 ohm
RV68	24366103	CF, 10k ohm
RV70	24366820	CF, 82 ohm
RV75	24366750	CF, 75 ohm
RV76	24366103	CF, 10k ohm
RV77	24366101	CF, 100 ohm
RV78	24366181	CF, 180 ohm
RV80	24366102	CF, 1k ohm
RV81	24366101	CF, 100 ohm
RV84	24366102	CF, 1k ohm
RV85	24366361	CF, 360 ohm
RV86	24366361	CF, 360 ohm
RV89	24366750	CF, 75 ohm
RV91	24552101	OMF, 100 ohm, 1/2W
RV95	24366271	CF, 270 ohm
RV100	24366101	CF, 100 ohm

Location No.	Part No.	Description
RV101	24366102	CF, 1k ohm
RV102	24366271	CF, 270 ohm
RV103	24366473	CF, 47k ohm
RV104	24366100	CF, 10 ohm
RV105	24366272	CF, 2700 ohm
RV106	24366223	CF, 22k ohm
RV107	24366223	CF, 22k ohm
RV108	24366103	CF, 10k ohm
RV109	24366103	CF, 10k ohm
RV110	24366123	CF, 12k ohm
RV111	24366103	CF, 10k ohm
RV112	24366103	CF, 10k ohm
RV123	24366750	CF, 75 ohm
RV124	24366750	CF, 75 ohm
RV125	24366101	CF, 100 ohm
RV126	24366472	CF, 4700 ohm
RV127	24366101	CF, 100 ohm
RV128	24366101	CF, 100 ohm
RV131	24366221	CF, 220 ohm
RV132	24366223	CF, 22k ohm
RV133	24366223	CF, 22k ohm
RV134	24366100	CF, 10 ohm
RV135	24366473	CF, 47k ohm
RV140	24366102	CF, 1k ohm
RV501	24366333	CF, 33k ohm
RV502	24366223	CF, 22k ohm
RV503	24366333	CF, 33k ohm
RV504	24366223	CF, 22k ohm
RV505	24366102	CF, 1k ohm
RV506	24366101	CF, 100 ohm
RV507	24366102	CF, 1k ohm
RV508	24366102	CF, 1k ohm
RV509	24366102	CF, 1k ohm
RV510	24366101	CF, 100 ohm
RV520	24366333	CF, 33k ohm
RV521	24366223	CF, 22k ohm
RV522	24366102	CF, 1k ohm
RV523	24366101	CF, 100 ohm
RV524	24366471	CF, 470 ohm
RV525	24366471	CF, 470 ohm
RV526	24366682	CF, 6800 ohm
RV527	24366133	CF, 13k ohm
RV528	24366681	CF, 680 ohm
RV531	24366332	CF, 3300 ohm
RV540	24366102	CF, 1k ohm
RW02	24366271	CF, 270 ohm
RW09	24366563	CF, 56k ohm
RW13	24366393	CF, 39k ohm
RW14	24552121	OMF, 120 ohm, 1/2W
RW15	24366223	CF, 22k ohm
RW16	24366273	CF, 27k ohm
RW17	24366333	CF, 33k ohm
RW18	24366101	CF, 100 ohm
RW19	24366100	CF, 10 ohm
RW20	24366392	CF, 3900 ohm
RW22	24366102	CF, 1k ohm
RW23	24366471	CF, 470 ohm
RW24	24366470	CF, 47 ohm
RW25	24366182	CF, 1800 ohm
RW30	24552100	OMF, 10 ohm, 1/2W
RW31	24552331	OMF, 330 ohm, 1/2W
RW32	24366820	CF, 82 ohm
RW33	24366683	CF, 68k ohm
RW34	24366820	CF, 82 ohm

Location No.	Part No.	Description
RW35	24366683	CF, 68k ohm
RW36	24366330	CF, 33 ohm
RW37	24366152	CF, 1500 ohm
RW38	24366102	CF, 1k ohm
RW39	24366152	CF, 1500 ohm
RW40	24366330	CF, 33 ohm
RW41	24366279	CF, 2.7 ohm
RW42	24366279	CF, 2.7 ohm
RW43	24554221	OMF, 220 ohm, 2W
RW44	24366122	CF, 1200 ohm
RW45	24366122	CF, 1200 ohm
RY604	24366102	CF, 1k ohm
RY605	24366104	CF, 100k ohm
RY606	24366393	CF, 39k ohm
RY607	24366153	CF, 15k ohm
RY608	24366152	CF, 1500 ohm
RY609	24366391	CF, 390 ohm
RY610	24382560	OMF, 56 ohm, 1W
RY613	24382820	OMF, 82 ohm, 1W
RY614	24366103	CF, 10k ohm
RY615	24366223	CF, 22k ohm
RY616	24366104	CF, 100k ohm
RY630	24366100	CF, 10 ohm
RY631	24366100	CF, 10 ohm
RZ01	24366102	CF, 1k ohm
RZ02	24366102	CF, 1k ohm
RZ03	24366332	CF, 3300 ohm
RZ04	24366102	CF, 1k ohm
RZ05	24366221	CF, 220 ohm
RZ06	24366821	CF, 820 ohm
RZ07	24366101	CF, 100 ohm
RZ08	24366471	CF, 470 ohm
RZ09	24366101	CF, 100 ohm
RZ10	24366222	CF, 2200 ohm
RZ11	24366101	CF, 100 ohm
RZ12	24366102	CF, 1k ohm
RZ13	24366102	CF, 1k ohm
RZ14	24366102	CF, 1k ohm
RZ15	24366102	CF, 1k ohm
RZ17	24366221	CF, 220 ohm
RZ18	24366471	CF, 470 ohm
RZ19	24366102	CF, 1k ohm
RZ20	24366101	CF, 100 ohm
RZ22	24366222	CF, 2200 ohm
RZ29	24366331	CF, 330 ohm
RZ30	24366331	CF, 330 ohm

COILS & TRANSFORMERS

Location No.	Part No.	Description
L101	23248035	Coil, Choke, TLN3278D
L102	23289100	Coil, Peaking, TRF4100AF
L103	23289100	Coil, Peaking, TRF4100AF
L104	23289220	Coil, Peaking, TRF4220AF
L111	23237999	Coil, Peaking, TRF4109AC
L112	23237999	Coil, Peaking, TRF4109AC
L115	23103852	Coil, Filter, TEM2028AH
L116	23237995	Coil, Peaking, TRF4229AC
L220	23103845	Coil, TEM2030AY
L221	23103845	Coil, TEM2030AY
L301	23103880	Coil (Ferrite Bead), TEM2011Y
L303	23237975	Coil, Peaking, TRF4101AC
L400	23289100	Coil, Peaking, TRF4100AF
L441	23233977	Coil, Linearity, TLN2203AG
L442	23248186	Coil, Choke, TLN3346AD
L462	23231135	Deflection Yoke, TDY707AS(R)
L463	23231135	Deflection Yoke, TDY707AS(R)
L464	23231135	Deflection Yoke, TDY707AS(R)
L465	23103880	Coil (Ferrite Bead), TEM2011Y
L468	23248115	Coil, Choke, TLN3367D
L472	23102441	Magnet, MAG-1094
L473	23102441	Magnet, MAG-1094
L474	23102441	Magnet, MAG-1094
L501	23289470	Coil, Peaking, TRF4470AF
L502	23289470	Coil, Peaking, TRF4470AF
L503	23289470	Coil, Peaking, TRF4470AF
L504	23289479	Coil, Peaking, TRF44R7AF
L505	23103845	Coil, TEM2030AY
L805	70211045	Coil, Choke, 0.02mH
L806	23248073	Coil, Choke, TLN3299D
L807	23248073	Coil, Choke, TLN3299D
L811	23103859	Coil (Ferrite Bead), TEM2011
L813	23103859	Coil (Ferrite Bead), TEM2011
L814	23221747	Coil, Choke, TRF9253D
L820	23289844	Coil, Peaking, TRF4470AT
L821	23248073	Coil, Choke, TLN3299D
L822	23248073	Coil, Choke, TLN3299D
L823	23280019	Coil, Peaking, TRF4330AZ
L830	23289844	Coil, Peaking, TRF4470AT
L831	23289844	Coil, Peaking, TRF4470AT
L851	23103859	Coil (Ferrite Bead), TEM2011
L853	23103859	Coil (Ferrite Bead), TEM2011
L854	23103859	Coil (Ferrite Bead), TEM2011
L855	23103859	Coil (Ferrite Bead), TEM2011
L856	23103859	Coil (Ferrite Bead), TEM2011
L857	23103859	Coil (Ferrite Bead), TEM2011
L858	23103859	Coil (Ferrite Bead), TEM2011
L859	23103775	Coil (Ferrite Bead), TEM2014
L860	23103775	Coil (Ferrite Bead), TEM2014
L883	23103859	Coil (Ferrite Bead), TEM2011
L884	23248073	Coil, Choke, TLN3299D
L885	23248073	Coil, Choke, TLN3299D
L886	23103775	Coil (Ferrite Bead), TEM2014
L888	23103859	Coil (Ferrite Bead), TEM2011
L891	23103859	Coil (Ferrite Bead), TEM2011
L911	23237987	Coil, Peaking, TRF4100AC
L961	23289100	Coil, Peaking, TRF4100AF
L962	23237991	Coil, Peaking, TRF4479AC
L963	23237975	Coil, Peaking, TRF4101AC
L7701	23103859	Coil (Ferrite Bead), TEM2011
L7702	23103859	Coil (Ferrite Bead), TEM2011
L7703	23103859	Coil (Ferrite Bead), TEM2011
L7704	23103859	Coil (Ferrite Bead), TEM2011
L7705	23103859	Coil (Ferrite Bead), TEM2011
L7706	23103859	Coil (Ferrite Bead), TEM2011
L7709	23238562	Coil, Peaking, TRF4109AJ
L7710	23238562	Coil, Peaking, TRF4109AJ
LA01	23289100	Coil, Peaking, TRF4100AF
LB01	23262996	Coil, IF, TRF1169D
LC26	23237999	Coil, Peaking, TRF4109AC
LQ01	23238709	Coil, Peaking, TRF4270AJ
LQ02	23238718	Coil, Peaking, TRF4479AJ
LQ03	23238718	Coil, Peaking, TRF4479AJ
LQ04	23238718	Coil, Peaking, TRF4479AJ
LT01	23238506	Coil, Peaking, TRF4229AJ
LT02	23238506	Coil, Peaking, TRF4229AJ
LT03	23237995	Coil, Peaking, TRF4229AC
LT04	23237995	Coil, Peaking, TRF4229AC
LT05	23237995	Coil, Peaking, TRF4229AC
LT06	23238506	Coil, Peaking, TRF4229AJ

Location No.	Part No.	Description
LT07	23238506	Coil, Peaking, TRF4229AJ
LT08	23238506	Coil, Peaking, TRF4229AJ
LT09	23238506	Coil, Peaking, TRF4229AJ
LT10	23238506	Coil, Peaking, TRF4229AJ
LT11	23103859	Coil (Ferrite Bead), TEM2011
LV01	23103852	Coil, Filter, TEM2028AH
LV02	23103852	Coil, Filter, TEM2028AH
LV40	23238709	Coil, Peaking, TRF4270AJ
LV41	23289270	Coil, Peaking, TRF4270AF
LV44	23238705	Coil, Peaking, TRF4560AJ
LV45	23289330	Coil, Peaking, TRF4330AF
LV47	23238705	Coil, Peaking, TRF4560AJ
LV47	23289100	Coil, Peaking, TRF4100AF
LV48	23289100	Coil, Peaking, TRF4100AF
LV50	23237983	Coil, Peaking, TRF4220AC
LV70	23289330	Coil, Peaking, TRF4330AF
LV501	23103852	Coil, Filter, TEM2028AH
LV502	23103852	Coil, Filter, TEM2028AH
LW02	23261974	Coil, Choke, HC5-035
LW04	23103859	Coil (Ferrite Bead), TEM2011
LW05	23103859	Coil (Ferrite Bead), TEM2011
LY01	23289100	Coil, Peaking, TRF4100AF
LY02	23289109	Coil, Peaking, TRF41R0AF
LZ01	23289220	Coil, Peaking, TRF4220AF
LZ04	23289330	Coil, Peaking, TRF4330AF
LZ05	23289270	Coil, Peaking, TRF4270AF
LZ08	23289390	Coil, Peaking, TRF4390AF
LZ09	70131060	Baze Filter, ZBF253D-00
LZ10	70131060	Baze Filter, ZBF253D-00
LZ11	70131060	Baze Filter, ZBF253D-00
T400	23224364	Transformer, Focus, TLN2168AH
T401	23224367	Transformer, Horiz. Drive, TLN1098AH
⚠T461	23236552	Transformer, Flyback, TFB3078BD
T461A	23192940	Anode Cap, TCCP5157
T461B	23960136	Adhesive, TSE3843-W
⚠T461Z	23236508	Transformer, Flyback, TFB3078ZD
⚠T801	23211712	Line Filter, TRF3209BQ
⚠T802	23211712	Line Filter, TRF3209BQ
⚠T803	23211713	Line Filter, TRF3197AQ
⚠T862	23217325	Transformer, Converter, TPW3345AM
⚠T863	23217326	Transformer, Converter, TPW3346AM

SEMICONDUCTORS

Location No.	Part No.	Description
Q201	23114528	Transistor, 2SC1740S, Q
Q202	23114530	Transistor, 2SA933S-Q
Q203	A6734590	Transistor, 2SC752(G)TM-Y
Q261	23114528	Transistor, 2SC1740S, Q
Q262	23114530	Transistor, 2SA933S-Q
Q263	23114530	Transistor, 2SA933S-Q
Q301	23319787	IC, LA7833S
Q301B	70391355	Screw, BITTB3X8 SZN
Q302	B0384625	IC, TA8859CP
Q310	A6317440	Transistor, 2SC1815-Y
Q311	A6534040	Transistor, 2SA1015-Y
Q340	23114528	Transistor, 2SC1740S, Q
Q341	23114530	Transistor, 2SA933S-Q
Q350	23114528	Transistor, 2SC1740S, Q
Q351	23114530	Transistor, 2SA933S-Q
Q352	A6002030	Transistor, RN1203
Q353	A6002030	Transistor, RN1203
Q354	A6534145	Transistor, 2SA1020-Y(C)
Q360	B0350510	IC, TA75558S
Q361	23314548	Transistor, 2SC4256
Q370	23114530	Transistor, 2SA933S-Q
Q402	A6330069	Transistor, 2CS2482 FA-1
Q404	A6873777	Transistor, 2SD2553
Q404B	72471082	Screw, BRDT2W3X10 SZN
Q420	23314141	Transistor, 2SC3852
Q420B	70391356	Screw, BITTB3X10 SZN
Q421	23114528	Transistor, 2SC1740S, Q
Q430	23314707	Transistor, 2SD1944, H
Q460	23314850	Transistor, 2SA1788, E
Q460B	72471082	Screw, BRDT2W3X10 SZN
Q461	23114528	Transistor, 2SC1740S, Q
Q462	23114528	Transistor, 2SC1740S, Q
Q463	23114528	Transistor, 2SC1740S, Q
Q464	23114530	Transistor, 2SA933S-Q
Q470	23114528	Transistor, 2SC1740S, Q
Q480	23314246	Transistor, 2SC2023 LF-4
Q483	B0345651	IC, TA7508P(J)
Q501	B0385677	IC, TA1222BN
Q502	23114528	Transistor, 2SC1740S, Q
Q503	23114528	Transistor, 2SC1740S, Q
Q506	B0470532	IC, TC4053BP
Q507	23114530	Transistor, 2SA933S-Q
Q508	23114530	Transistor, 2SA933S-Q
Q509	23114530	Transistor, 2SA933S-Q
Q510	23114528	Transistor, 2SC1740S, Q
Q511	23114528	Transistor, 2SC1740S, Q
Q512	23114528	Transistor, 2SC1740S, Q
Q513	23114528	Transistor, 2SC1740S, Q
Q514	23114528	Transistor, 2SC1740S, Q
Q530	B0470532	IC, TC4053BP
Q531	23114528	Transistor, 2SC1740S, Q
Q532	23114528	Transistor, 2SC1740S, Q
Q533	23114528	Transistor, 2SC1740S, Q
Q601	23318413	IC, LA4282
Q612	23114530	Transistor, 2SA933S-Q
Q613	23114528	Transistor, 2SC1740S, Q
Q681	A6342200	Transistor, 2CS2878-A
Q682	A6342200	Transistor, 2CS2878-A
Q683	23114530	Transistor, 2SA933S-Q
Q702	23114528	Transistor, 2SC1740S, Q
Q751	23905094	IC, STR392-110
Q752	23905094	IC, STR392-110
Q754	23904521	IC, AN7805
Q754B	70391355	Screw, BITTB3X8 SZN
Q755	23904525	IC, AN7809
Q755B	70391355	Screw, BITTB3X8 SZN
Q756	23318841	IC, AN79M09F
Q756B	70391355	Screw, BITTB3X8 SZN
Q757	23114528	Transistor, 2SC1740S, Q
Q758	23114528	Transistor, 2SC1740S, Q
Q759	23114530	Transistor, 2SA933S-Q
Q761	23114530	Transistor, 2SA933S-Q
Q762	23114528	Transistor, 2SC1740S, Q
Q764	B0487045	IC, TC74HC4049AP
Q765	23114528	Transistor, 2SC1740S, Q
Q766	23114528	Transistor, 2SC1740S, Q
Q767	B0470662	IC, TC4066BP
Q768	23114530	Transistor, 2SA933S-Q
Q769	23114528	Transistor, 2SC1740S, Q

Location No.	Part No.	Description
Q770	23114530	Transistor, 2SA933S-Q
Q771	A6533730	Transistor, 2SA1012-Y
Q771B	23035308	Screw, BTB3X8SZN
Q780	23114530	Transistor, 2SA933S-Q
Q781	23114528	Transistor, 2SC1740S, Q
Q782	23114528	Transistor, 2SC1740S, Q
Q801	23905084	IC, STR-S6709, L
Q801B	70391356	Screw, BITTB3X10 SZN
Q802	23314707	Transistor, 2SD1944, H
Q803	23904247	IC, STR-S6708
Q803B	23037312	Screw, BTBW3X12SZN
Q804	23314707	Transistor, 2SD1944, H
⚠Q826	A8643108	Photo Coupler, TLP621(GR-LF
⚠Q828	A8643108	Photo Coupler, TLP621(GR-LF
Q829	23114530	Transistor, 2SA933S-Q
Q831	23904521	IC, AN7805
Q831B	70391356	Screw, BITTB3X10 SZN
Q832	23905977	IC, PQ09RD11
Q832B	70391356	Screw, BITTB3X10 SZN
Q835	23906125	IC, PQ30RV11
Q835B	70391355	Screw, BITTB3X8 SZN
Q837	A6002020	Transistor, RN1202
Q845	A6000050	Transistor, RN1005
Q846	23114528	Transistor, 2SC1740S, Q
Q850	23114530	Transistor, 2SA933S-Q
Q851	23319306	IC, SE012N
Q852	23318299	IC, L78MR05
Q852C	23035308	Screw, BTB3X8SZN
Q855	23114528	Transistor, 2SC1740S, Q
Q857	23114528	Transistor, 2SC1740S, Q
Q858	A6002050	Transistor, RN1205
Q859	23114528	Transistor, 2SC1740S, Q
Q860	A6000050	Transistor, RN1005
Q875	70129444	IC, PST994D
Q901	A6372621	Transistor, 2SC5360
Q902	23114528	Transistor, 2SC1740S, Q
Q911	A6372621	Transistor, 2SC5360
Q913	23114528	Transistor, 2SC1740S, Q
Q914	A6321240	Transistor, 2SC2120-Y
Q917	23114528	Transistor, 2SC1740S, Q
Q918	23114530	Transistor, 2SA933S-Q
Q919	23114528	Transistor, 2SC1740S, Q
Q920	23114530	Transistor, 2SA933S-Q
Q921	A6372621	Transistor, 2SC5360
Q922	23114528	Transistor, 2SC1740S, Q
Q925	23114528	Transistor, 2SC1740S, Q
Q926	23114528	Transistor, 2SC1740S, Q
Q961	23114528	Transistor, 2SC1740S, Q
Q962	A6509140	Transistor, 2SA562TM-Y
Q963	23114528	Transistor, 2SC1740S, Q
Q964	23114530	Transistor, 2SA933S-Q
Q965	23114528	Transistor, 2SC1740S, Q
Q966	23114530	Transistor, 2SA933S-Q
Q8501	23114528	Transistor, 2SC1740S, Q
Q9601	23114530	Transistor, 2SA933S-Q
Q9602	23114530	Transistor, 2SA933S-Q
Q9605	23114528	Transistor, 2SC1740S, Q
Q9606	23114530	Transistor, 2SA933S-Q
QA01	23000990	IC, TMP87CS38N-1C13
QA02	23905666	IC, AT24C1610PC
QB01	23114528	Transistor, 2SC1740S, Q
QB02	23114530	Transistor, 2SA933S-Q
QB03	A6002050	Transistor, RN1205
QB71	A6342200	Transistor, 2CS2878-A

Location No.	Part No.	Description
QB72	A6342200	Transistor, 2CS2878-A
QB73	23114530	Transistor, 2SA933S-Q
QB81	A6342200	Transistor, 2CS2878-A
QB82	A6342200	Transistor, 2CS2878-A
QB83	23114530	Transistor, 2SA933S-Q
QB84	23114528	Transistor, 2SC1740S, Q
QB85	23114530	Transistor, 2SA933S-Q
QB86	23114530	Transistor, 2SA933S-Q
QB87	23114530	Transistor, 2SA933S-Q
QB88	23114530	Transistor, 2SA933S-Q
QB92	23114528	Transistor, 2SC1740S, Q
QB93	23114530	Transistor, 2SA933S-Q
QB94	23114530	Transistor, 2SA933S-Q
QB95	23114530	Transistor, 2SA933S-Q
QB96	23114530	Transistor, 2SA933S-Q
QD80	23114530	Transistor, 2SA933S-Q
QG01	B0385643	IC, TA1216AN
QG02	23114528	Transistor, 2SC1740S, Q
QG03	23114528	Transistor, 2SC1740S, Q
QQ01	B0385755	IC, TA1229N
QQ02	B0383881	IC, TA8772AN
QQ03	23114528	Transistor, 2SC1740S, Q
QQ04	23114528	Transistor, 2SC1740S, Q
QR01	B0487584	IC, TC74HC4053AP
QR04	23114530	Transistor, 2SA933S-Q
QR05	23114530	Transistor, 2SA933S-Q
QR06	23114530	Transistor, 2SA933S-Q
QR15	23114530	Transistor, 2SA933S-Q
QR17	23114528	Transistor, 2SC1740S, Q
QR18	A6734590	Transistor, 2SC752(G)TM-Y
QR19	A6734590	Transistor, 2SC752(G)TM-Y
QR20	23114528	Transistor, 2SC1740S, Q
QR21	23114528	Transistor, 2SC1740S, Q
QR22	23114528	Transistor, 2SC1740S, Q
QR90	B0470532	IC, TC4053BP
QR91	23114528	Transistor, 2SC1740S, Q
QR92	23114528	Transistor, 2SC1740S, Q
QR93	23114528	Transistor, 2SC1740S, Q
QR94	23114528	Transistor, 2SC1740S, Q
QS01	A6342200	Transistor, 2CS2878-A
QS02	A6342200	Transistor, 2CS2878-A
QS03	A6010040	Transistor, RN2004
QS04	23114528	Transistor, 2SC1740S, Q
QS05	23114528	Transistor, 2SC1740S, Q
QS601	23114528	Transistor, 2SC1740S, Q
QS602	23114528	Transistor, 2SC1740S, Q
QS603	A6342200	Transistor, 2CS2878-A
QS604	A6342200	Transistor, 2CS2878-A
QS671	23906596	IC, BA4558
QS672	A6342200	Transistor, 2CS2878-A
QS673	A6010040	Transistor, RN2004
QT01	23000994	IC, SAA5264PS
QT02	23114528	Transistor, 2SC1740S, Q
QT03	A6734590	Transistor, 2SC752(G)TM-Y
QT04	23114530	Transistor, 2SA933S-Q
QT06	23906484	IC, BA033T
QT07	23906809	IC, S-24C02ADPA
QV01	B0385650	IC, TA1218N
QV03	A6002030	Transistor, RN1203
QV05	A6002030	Transistor, RN1203
QV10	23114528	Transistor, 2SC1740S, Q
QV11	23114528	Transistor, 2SC1740S, Q
QV12	23114528	Transistor, 2SC1740S, Q
QV13	23114528	Transistor, 2SC1740S, Q

Location No.	Part No.	Description
QV14	A6002030	Transistor, RN1203
QV40	23114528	Transistor, 2SC1740S, Q
QV41	23114528	Transistor, 2SC1740S, Q
QV42	23114530	Transistor, 2SA933S-Q
QV43	23114530	Transistor, 2SA933S-Q
QV47	23114530	Transistor, 2SA933S-Q
QV49	23114528	Transistor, 2SC1740S, Q
QV50	23114528	Transistor, 2SC1740S, Q
QV51	23114528	Transistor, 2SC1740S, Q
QV52	A6342200	Transistor, 2CS2878-A
QV70	A6342200	Transistor, 2CS2878-A
QV502	23114528	Transistor, 2SC1740S, Q
QV503	23114528	Transistor, 2SC1740S, Q
QV504	23114530	Transistor, 2SA933S-Q
QV509	23114528	Transistor, 2SC1740S, Q
QV510	23114530	Transistor, 2SA933S-Q
QV512	23114528	Transistor, 2SC1740S, Q
QV520	23114528	Transistor, 2SC1740S, Q
QW06	23114528	Transistor, 2SC1740S, Q
QW07	A6734590	Transistor, 2SC752(G)TM-Y
QW09	23114528	Transistor, 2SC1740S, Q
QW10	23114530	Transistor, 2SA933S-Q
QW19	23114528	Transistor, 2SC1740S, Q
QW20	23114528	Transistor, 2SC1740S, Q
QW51	23314701	Transistor, 2SB1186A, E
QW52	23314705	Transistor, 2SD1763A, VE
QY601	23318255	IC, μPC1406HA
QY602	23114528	Transistor, 2SC1740S, Q
QY604	A6342200	Transistor, 2CS2878-A
QY605	23114529	Transistor, 2SA933S-R
QY606	A6010040	Transistor, RN2004
QZ01	B0410895	IC, TC90A49P
QZ02	23114528	Transistor, 2SC1740S, Q
QZ03	23114530	Transistor, 2SA933S-Q
QZ04	23114530	Transistor, 2SA933S-Q
QZ05	23114530	Transistor, 2SA933S-Q
QZ06	23114530	Transistor, 2SA933S-Q
QZ07	23114530	Transistor, 2SA933S-Q
QZ08	23114528	Transistor, 2SC1740S, Q
D101	23316411	Diode, Zener, HZT33-12
D201	23118859	Diode, 1SS133
D215	23118859	Diode, 1SS133
D216	23118859	Diode, 1SS133
D217	23118859	Diode, 1SS133
D218	23118859	Diode, 1SS133
D219	23118859	Diode, 1SS133
D220	23118859	Diode, 1SS133
D221	23118517	Diode, Zener, RD9.1ESA B2
D301	23118094	Diode, EU2A
D302	23118094	Diode, EU2A
D303	23118859	Diode, 1SS133
D308	23118822	Diode, ERB12-02
D309	23118822	Diode, ERB12-02
D310	23118094	Diode, EU2A
D315	23118859	Diode, 1SS133
D332	23316794	Diode, SC570ALFE2
D340	23118859	Diode, 1SS133
D341	23118538	Diode, Zener, RD6.2ESA B2
D350	23118859	Diode, 1SS133
D351	23118859	Diode, 1SS133
D352	23118859	Diode, 1SS133
D353	23118529	Diode, Zener, RD5.6ESA B2
D354	23118859	Diode, 1SS133
D357	23118859	Diode, 1SS133

Location No.	Part No.	Description
D360	23118526	Diode, Zener, RD6.8ESA B2
D370	23118529	Diode, Zener, RD5.6ESA B2
D401	23118622	Diode, Zener, RD10ESA B2
D406	A7978850	Diode, S5295G
D408	23118338	Diode, RU-4AM LF-L1
D427	23118524	Diode, Zener, RD7.5ESA B1
D430	23118531	Diode, Zener, RD5.1ESA B3
D431	23118859	Diode, 1SS133
D432	23118531	Diode, Zener, RD5.1ESA B3
D438	23118094	Diode, EU2A
D441	23118504	Diode, Zener, RD15ESA B3
D442	23118859	Diode, 1SS133
D443	23118338	Diode, RU-4AM LF-L1
D444	23118338	Diode, RU-4AM LF-L1
D448	23118094	Diode, EU2A
D458	23115774	Diode, Zener, RD6.2E(4)
D459	23118859	Diode, 1SS133
D460	A7568480	Diode, TVR1G
D461	23316582	Diode, ERC20-06
D463	23118859	Diode, 1SS133
D464	23118512	Diode, Zener, RD12ESA B1
D465	23118512	Diode, Zener, RD12ESA B1
D470	23118859	Diode, 1SS133
D471	A7568460	Diode, TVR-1B
D474	23118511	Diode, Zener, RD12ESA B2
D482	23118094	Diode, EU2A
D483	23118510	Diode, Zener, RD12ESA B3
D484	23118859	Diode, 1SS133
D485	23118504	Diode, Zener, RD15ESA B3
D487	A7568752	Diode, 1S1887A, FA
D488	23118859	Diode, 1SS133
D489	23118523	Diode, Zener, RD7.5ESA B2
D496	23118533	Diode, Zener, RD5.1ESA B1
D498	23118504	Diode, Zener, RD15ESA B3
D499	23118611	Diode, Zener, RD30ESA B3
D601	23118859	Diode, 1SS133
D602	23118859	Diode, 1SS133
D603	23118859	Diode, 1SS133
D604	23118859	Diode, 1SS133
D608	23118859	Diode, 1SS133
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D613	23118859	Diode, 1SS133
D614	23118859	Diode, 1SS133
D615	23118859	Diode, 1SS133
D801	23316784	Diode, RBV-1506, LA
D801B	23035308	Screw, BTB 3X8 SZN
D803	23118094	Diode, EU2A
D804	23118526	Diode, Zener, RD6.8ESA B2
D805	23118859	Diode, 1SS133
D806	23118094	Diode, EU2A
D808	23118094	Diode, EU2A
D809	A7270200	Diode, Zener, 1Z6.2
D810	23118859	Diode, 1SS133
D811	23118859	Diode, 1SS133
D812	23118451	Diode, RU-4A LF-L1
D815	23118505	Diode, Zener, RD15ESA B2
D816	23118609	Diode, Zener, RD33ESA B1
D817	23118609	Diode, Zener, RD33ESA B1
D820	23118609	Diode, Zener, RD33ESA B1
D821	23118609	Diode, Zener, RD33ESA B1
D822	23118529	Diode, Zener, RD5.6ESA B2
D828	23118859	Diode, 1SS133

Location No.	Part No.	Description
D835	23115532	Diode, ERB12-01
D837	23118529	Diode, Zener, RD5.6ESA B2
D838	23118859	Diode, 1SS133
D839	23115532	Diode, ERB12-01
D850	23118173	Diode, RBV-406M, LA
D852	23118094	Diode, EU2A
D853	23118094	Diode, EU2A
D854	A7270200	Diode, Zener, 1Z6.2
D855	23118505	Diode, Zener, RD15ESA B2
D856	23118094	Diode, EU2A
D857	23118859	Diode, 1SS133
D858	23118094	Diode, EU2A
D859	23118526	Diode, Zener, RD6.8ESA B2
D860	23118859	Diode, 1SS133
D861	23118497	Diode, Zener, RD22ESA B1
D862	23118859	Diode, 1SS133
D863	23118094	Diode, EU2A
D864	23316184	Diode, FML-G12S
D864B	70391355	Screw, BITTB3X8 SZN
D865	23316184	Diode, FML-G12S
D865B	70391355	Screw, BITTB3X8 SZN
D867	23118094	Diode, EU2A
D868	23316714	Diode, RL2Z
D869	23118859	Diode, 1SS133
D870	23118859	Diode, 1SS133
D871	23118859	Diode, 1SS133
D872	23118526	Diode, Zener, RD6.8ESA B2
D873	23118526	Diode, Zener, RD6.8ESA B2
D874	23118859	Diode, 1SS133
D875	23118859	Diode, 1SS133
D876	23118859	Diode, 1SS133
D877	23118859	Diode, 1SS133
D878	23118602	Diode, Zener, RD36ESA B4
D879	23118529	Diode, Zener, RD5.6ESA B2
D880	23118529	Diode, Zener, RD5.6ESA B2
D881	23118598	Diode, Zener, RD39ESA B4
D882	23118859	Diode, 1SS133
D883	23316406	Diode, FML-G16S
D883B	70391355	Screw, BITTB3X8 SZN
D885	23316184	Diode, FML-G12S
D891	23316184	Diode, FML-G12S
D896	23118060	Diode, AL01Z
D899	24000656	Varistor, TNR15G471K
D901	23118859	Diode, 1SS133
D902	23118859	Diode, 1SS133
D903	23118859	Diode, 1SS133
D911	23118859	Diode, 1SS133
D912	23118859	Diode, 1SS133
D913	23118859	Diode, 1SS133
D915	23118859	Diode, 1SS133
D921	23118859	Diode, 1SS133
D922	23118859	Diode, 1SS133
D924	23118859	Diode, 1SS133
D925	23118859	Diode, 1SS133
D926	23118859	Diode, 1SS133
D961	23118859	Diode, 1SS133
D962	23118859	Diode, 1SS133
D965	23118859	Diode, 1SS133
D966	23118859	Diode, 1SS133
D7701	23118859	Diode, 1SS133
D7702	23115532	Diode, ERB12-01
D7705	23118859	Diode, 1SS133
D7706	23118859	Diode, 1SS133
D7707	23118859	Diode, 1SS133

Location No.	Part No.	Description
D7708	23118859	Diode, 1SS133
D7709	23118538	Diode, Zener, RD6.2ESA B2
D7710	23118514	Diode, Zener, RD11ESA B2
D7711	23118514	Diode, Zener, RD11ESA B2
D7717	23118538	Diode, Zener, RD6.2ESA B2
D7718	23118538	Diode, Zener, RD6.2ESA B2
D7719	23118538	Diode, Zener, RD6.2ESA B2
D7720	23118538	Diode, Zener, RD6.2ESA B2
D7721	23118538	Diode, Zener, RD6.2ESA B2
D7722	23118538	Diode, Zener, RD6.2ESA B2
D7726	23115532	Diode, ERB12-01
D7727	23115532	Diode, ERB12-01
D7728	23115532	Diode, ERB12-01
D7729	23118859	Diode, 1SS133
D7801	23118859	Diode, 1SS133
D7802	23118859	Diode, 1SS133
D7803	23118859	Diode, 1SS133
DA42	23118538	Diode, Zener, RD6.2ESA B2
DA69	23118538	Diode, Zener, RD6.2ESA B2
DB01	23358542	Diode (LED), 339-1EVGW
DB03	23358522	Diode (LED), SIR-56SB3F
DD80	23118859	Diode, 1SS133
DR01	23316817	Diode, 1SS120-7
DR31	23118859	Diode, 1SS133
DR90	23118859	Diode, 1SS133
DS671	23118495	Diode, Zener, RD22ESA B3
DV01	23118518	Diode, Zener, RD9.1ESA B1
DV02	23118518	Diode, Zener, RD9.1ESA B1
DV03	23118518	Diode, Zener, RD9.1ESA B1
DV04	23118518	Diode, Zener, RD9.1ESA B1
DV05	23118518	Diode, Zener, RD9.1ESA B1
DV06	23118859	Diode, 1SS133
DV07	23118518	Diode, Zener, RD9.1ESA B1
DW04	23118859	Diode, 1SS133
DW05	23118859	Diode, 1SS133
DW21	23118859	Diode, 1SS133
DY601	23118859	Diode, 1SS133
DY602	23118859	Diode, 1SS133
MISCELLANEOUS		
B107	23711305	Screw, PP3X.5X5BNI
B224	23035412	Screw, BTB 4X12 SZN
B225	23035412	Screw, BTB 4X12 SZN
B230	23037312	Screw, BTBW 3X12 SZN
B233	23035412	Screw, BTB 4X12 SZN
B234	23030937	Screw, BTBW 3X12 SBN
B237	23035412	Screw, BTB 4X12 SZN
B239	23035412	Screw, BTB 4X12 SZN
B250	23539014	Ornament, BACK A
B251	23550945	Label, Model No. 43N9UXE
B251	23564017	Label, Model No. 43N9UXH
B251	23564094	Label, Model No. 43N9UXM
B251	23564095	Label, Model No. 43N9UXA
B330	23037312	Screw, BTBW 3X12 SZN
B332	23037312	Screw, BTBW 3X12 SZN
BB20	23903022	Socket, 8P
BB20A	23368627	Plug, 8P
BB21	23903022	Socket, 8P
BB50	23903022	Socket, 8P
BB50A	23368627	Plug, 8P
BB51	23903022	Socket, 8P
BB80	23903022	Socket, 8P
BB80A	23368627	Plug, 8P
BB81	23903022	Socket, 8P

Location No.	Part No.	Description
BB90	23903022	Socket, 8P
BB90A	23368627	Plug, 8P
BB91	23903022	Socket, 8P
E935	23710134	Screw, SCREW PP4
E943	23710134	Screw, SCREW PP4
E956	23710134	Screw, SCREW PP4
E966	23960136	Adhesive, TSE3843-W
E976	23960136	Adhesive, TSE3843-W
E986	23960136	Adhesive, TSE3843-W
⚠F801	23144458	Fuse, 5.0A, 250V
F801A	23165433	Holder, Fuse
⚠F802	23144870	Fuse, 2.0A, 250V
F802A	23165433	Holder, Fuse
F802B	23165433	Holder, Fuse
⚠F803	23144870	Fuse, 2.0A, 250V
F803A	23165433	Holder, Fuse
F803B	23165433	Holder, Fuse
⚠F805	23144867	Fuse, 4.0A, 250V
F805A	23165433	Holder, Fuse
F805B	23165433	Holder, Fuse
⚠F807	23144870	Fuse, 2.0A, 250V
F807A	23165433	Holder, Fuse
F807B	23165433	Holder, Fuse
⚠F809	23144873	Fuse, 1A, 250V
F809A	23165433	Holder, Fuse
F809B	23165433	Holder, Fuse
⚠F810	23144869	Fuse, 2.5A, 250V
F810A	23165433	Holder, Fuse
F810B	23165433	Holder, Fuse
⚠F811	23144869	Fuse, 2.5A, 250V
F811A	23165433	Holder, Fuse
F811B	23165433	Holder, Fuse
G005	23118859	Diode, 1SS133
G023	24327180	MF, 18 ohm, ±1%, 1/4W
G101	23237999	Coil, Peaking, TRF4109AC
GZ02	23289100	Coil, Peaking, TRF4100AF
GZ03	23289100	Coil, Peaking, TRF4100AF
H002	23148337	Module, MVCS42A, IF
HY02	23148327	Module, MVCM13, PIP
KB01	23904946	Remote Sensor, RPM-676CBR-S
P506	23902852	Socket, B-B, 7P
P507	23902655	Socket, B-B, 15P
P520	23164560	Plug, 6P
P661	23363607	Jack, Headphone
P708	23902863	Socket, 20P
P709	23902863	Socket, 20P
P713	23164787	Plug, 7P
P714	23164787	Plug, 7P
P715	23164787	Plug, 7P
P720	23164786	Plug, 6P
⚠P801	23372023	Power Cord (43N9UXE/43N9UXH)
⚠P801	23372010	Power Cord (43N9UXM)
⚠P801	23372026	Power Cord (43N9UXA)
PB12	23164560	Plug, 6P
PM01	23367724	Plug, B-B,15P
PM02	23368511	Plug, B-B, 7P
PR01A	23902655	Socket, B-B, 15P
PR01B	23367724	Plug, B-B,15P
PR02A	23902655	Socket, B-B, 15P
PR02B	23367724	Plug, B-B,15P
PU01	23368634	Plug, 25P
PU01	23903025	Socket, 25P
PU02	23368634	Plug, 25P
PU02	23903025	Socket, 25P
PV01	23365837	Jack, 1S6P
PV02	23365966	Jack, 1S6P
PV06	23365972	Jack, 6P
PV63	23164563	Plug, 3P
PV520	23164560	Plug, 6P
PY630	23363607	Jack, Headphone
PZ01	23902655	Socket, B-B, 15P
QR01	24366561	CF, 560 ohm(43N9UXH)
S601	23145411	Switch, Slide, 2C2P
⚠S801	23145434	Switch Power, 2C2P
SA01	23145226	Switch, Push, 1C1P
SA02	23145226	Switch, Push, 1C1P
SA03	23145226	Switch, Push, 1C1P
SA04	23145226	Switch, Push, 1C1P
SA06	23145226	Switch, Push, 1C1P
SA07	23145226	Switch, Push, 1C1P
⚠SR80	23146547	Relay, DC12V
⚠SR81	23146547	Relay, DC12V
⚠V901A	23902019	Socket, CRT, 10P
⚠V902A	23902019	Socket, CRT, 10P
⚠V903A	23902019	Socket, CRT, 10P
W661	23351131	Speaker, SPK-1390, 120X120mm, 16 ohm
W662	23351131	Speaker, SPK-1390, 120X120mm, 16 ohm
X401	23153721	Ceramic Resonator, 503kHz, TCR1023
X501	23153961	Crystal, 3.58MHz
X503	23153979	Crystal, 4.43MHz
XA01	23153325	Ceramic Resonator, 8.00MHz, TCR1056
XQ01	23153969	Crystal, 4.00MHz
XT01	23153930	Crystal, 12.0MHz
⚠Z410	23110842	Focus Pack, TPA6031
Z410A	23505177	Focus Cable
⚠Z450	24082877	CR Block, TPA5007
Z450A	23504953	Anode Cable
Z470	23110845	Focus Pack, TPA6032BH
Z801	23904998	IC, HIC1016
Z868	23144539	Protector, PRF20005491, 125V, 2A
Z890	23144539	Protector, PRF20005491, 125V, 2A
ZC01	23148328	Module, CM43P21HA, CONVER43
ZT01	23153736	Ceramic Resonator, TCR1025
ZV01	23107519	Ceramic Video Trap, 4.43MHz, TCF1066
ZY01	23148722	Module, MKMP32A, MULTI PICTURE
ZY02	23148339	Module, YC3D22H, 3D-YCS

PC BOARD ASSEMBLIES

✻M011Z		BACK/AV Board, PB9086-1
✻M012Z		SELCT Board, PB9086-2
✻M021Z		RMT IN Board, PB9211-1
✻M022Z		FRT IN Board, PB9211-2
✻M024Z		FRT CON Board, PB9211-4
✻M031Z		CRT-D/R Board, PB9090-1
✻M032Z		CRT-D/G Board, PB9090-2
✻M033Z		CRT-D/B Board, PB9090-3
✻M034Z		SVM Board, PB9090-4

Location No.	Part No.	Description
* M080Z		Power2 Board, PB9193-1
* M081Z		AC-IN Board, PB9193-2
* U401		DEF Board, PB9046 (43N9UXE/UXM/UXA)
* U401		DEF Board, PB9053(43N9UXH)
* U801		CONV/POW1 Board, PB9192
* U901		JUSHIN Board, PB9051 (43N9UXE/UXM/UXA)
* U901		JUSHIN Board, PB9052 (43N9UXH)
* U902		VCD Board, PB9087
* UM01		TEXT Board, PB9058

PICTURE TUBE

Location No.	Part No.	Description
⚠V901R	23003866	Protector Coupling, CRT KANS R 43R
⚠V902G	23003867	Protector Coupling, CRT KANS G 43N9
⚠V903B	23003868	Protector Coupling, CRT KANS B 43B

TUNER

Location No.	Part No.	Description
H001	23321358	Tuner, ECA35LX1
HY01	23321356	Tuner, ECA32LX1

ACCESSORIES

Location No.	Part No.	Description
K902	23306287	Remote Hand Unit, CT-9969 (43N9UXE/UXM/UXA)
K902	23306286	Remote Hand Unit, CT-9968 (43N9UXH)
AT03	23588382	Battery Cover
Y101A	23563777	Owner's Manual, English, 43N9UXE/43N9UXA
Y101A	23563778	Owner's Manual, Hong Kong, 43N9UXH
Y101B	23563779	Owner's Manual, Arabic, 43N9UXM
Y108	23122780	AC Adaptor, 2P(43N9UXM)
Y109	23943846	Cover, Poly

CABINET PARTS

Location No.	Part No.	Description
A101	23411279	Wood Cabinet
A107	23549746	Rear Board Cover
A171	23436705	Foot (Wood Cabinet)
A201	23549748	Front Panel
A202	23450202	Control Panel
A203	23549749	Front Cover
A204	23527117	Speaker Grille R
A205	23527118	Speaker Grille L
A221	23427759	Door
A222	23445343	Button, Power
A223	23445344	Button, Control
A226	23451204	Push, Catch
A227	23836492	Spring, Coil
⚠A401	23549702	Back Board
A402	23549731	Mirror Cover
A406	23845485	Safety Belt
A505	72471068	Screw, BIDT2 4X12BZ
A506	23035412	Screw, BTB4X12SZN
A507	23035412	Screw, BTB4X12SZN
A519	72471068	Screw, BIDT2 4X12BZ
A520	23037310	Screw, BTBW 3X10SZN

Location No.	Part No.	Description
A521	23035412	Screw, BTB4X12SZN
A527	23035412	Screw, BTB4X12SZN
A529	23035412	Screw, BTB4X12SZN
A530	23035412	Screw, BTB4X12SZN
A701	23064059	Case, Upper (43N9UXE)
A701	23064096	Case, Upper (43N9UXH)
A701	23064143	Case, Upper (43N9UXM)
A701	23064104	Case, Upper (43N9UXA)
A702	23935956	Packing, Top
A703	23845450	Joint
A706	23943008	Cover, Poly
A707	23064060	Case, Bottom
A710	23935957	Packing, Bottom
A711	23531107	Packin, Protective Sheet
K103	23430690	Lens, SSM65AB43
K201	23430691	Lens, SSM65C(R)
K202	23430692	Lens, SSM65C(G)
K203	23430693	Lens, SSM65C
K501	23430695	Lenti Sheet, SCREEN43KJAL
K502	23430696	Fresnel Sheet, SCREEN43KJAF
K601	23430601	Mirror, MIRROR43J

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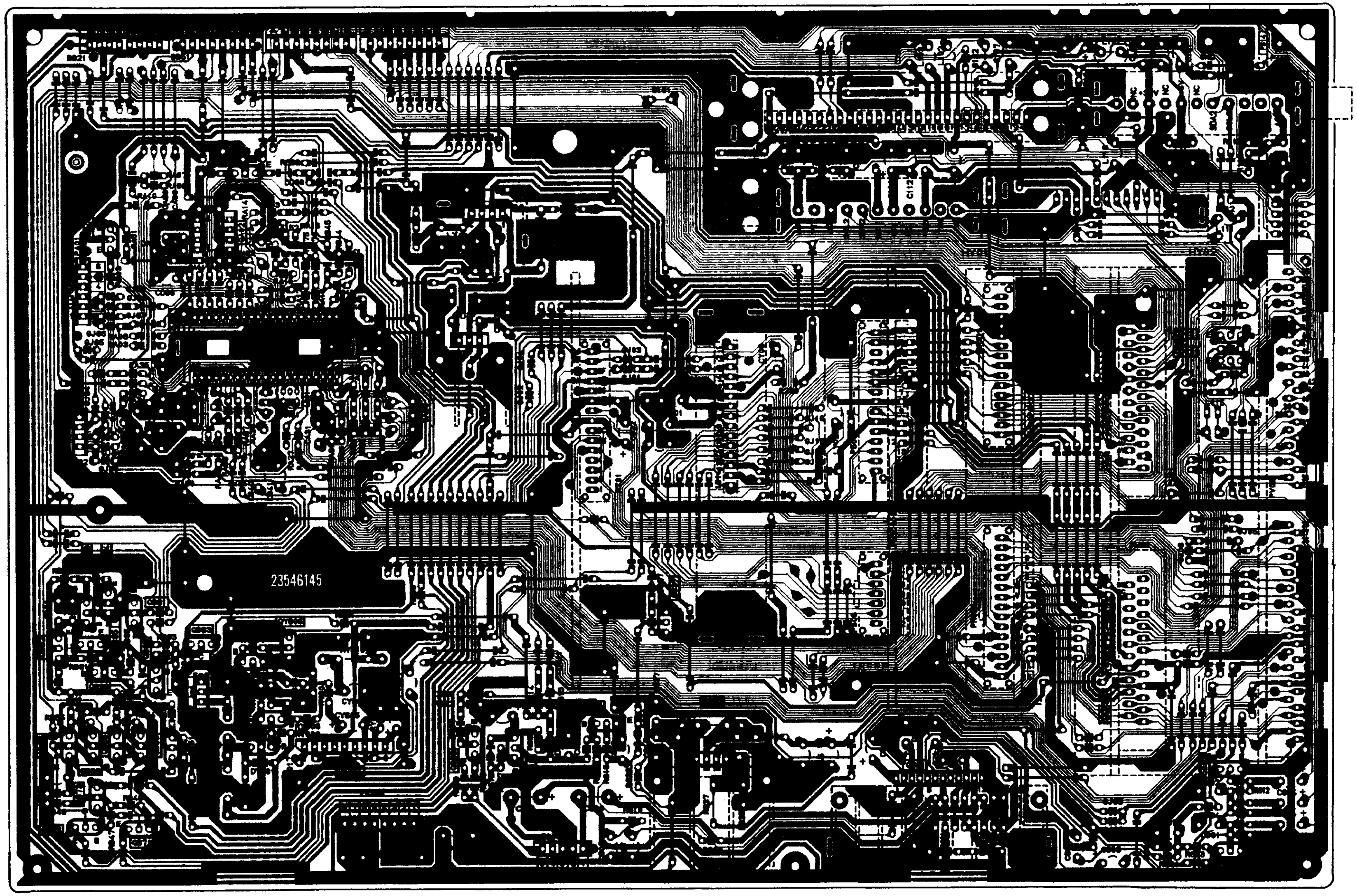
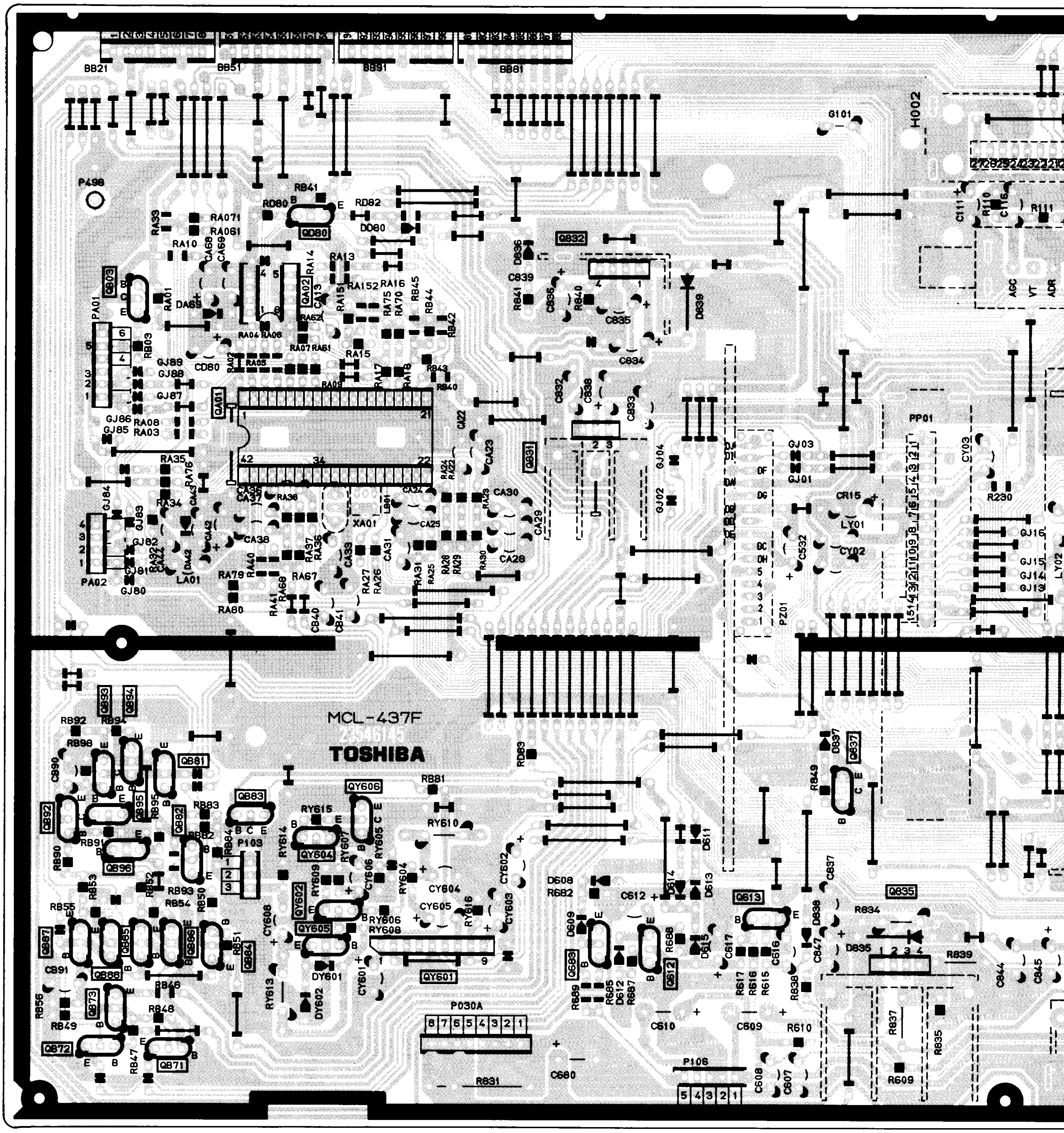
JUSHIN (SIG) BOARD PB9051

BOTTOM (FOIL) SIDE



JUSHIN (SIG) BOARD PB9051

BOTTOM (FOIL) SIDE



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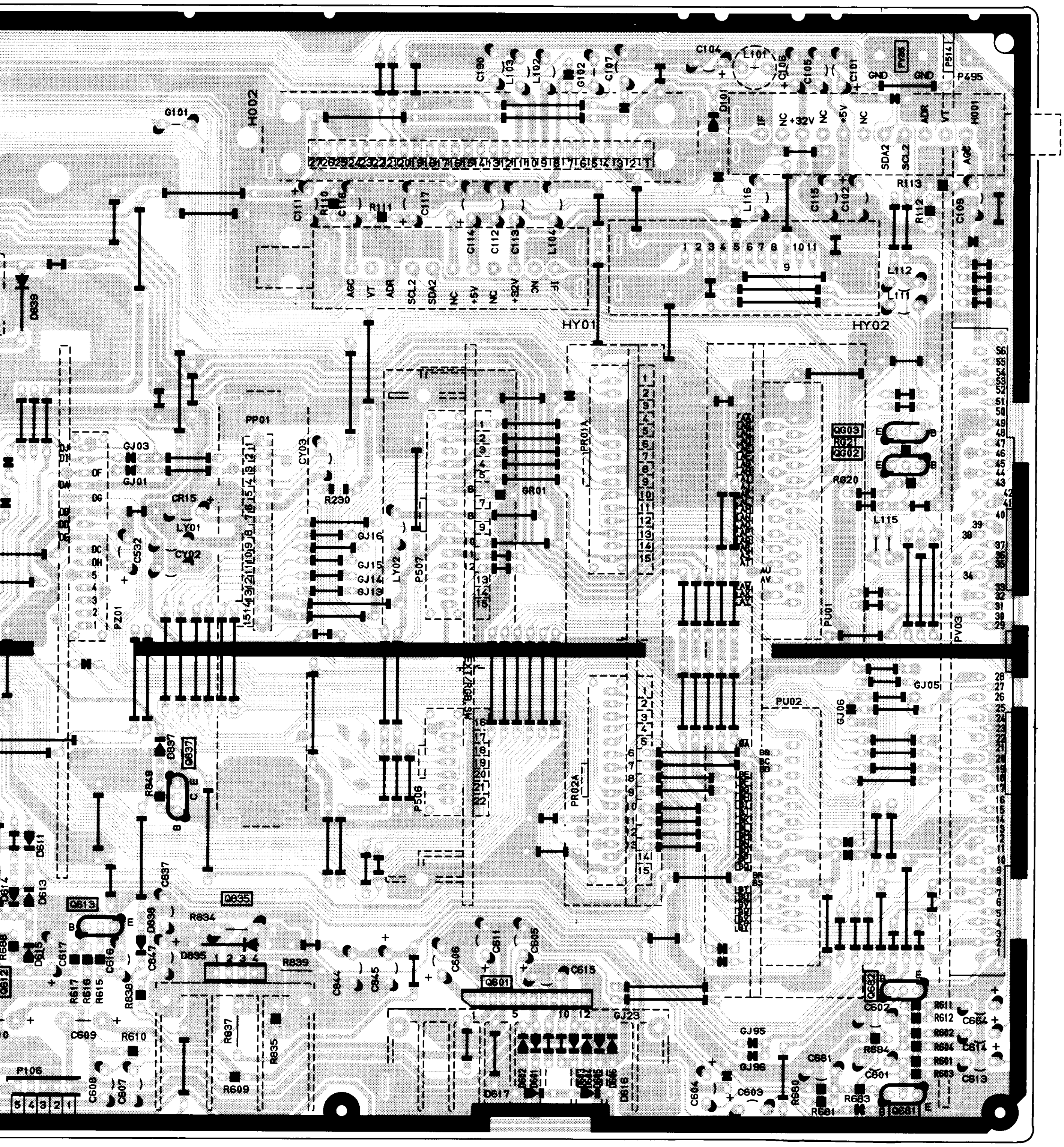
USHIN (SIG) BOARD PB9051

BOTTOM (FOIL) SIDE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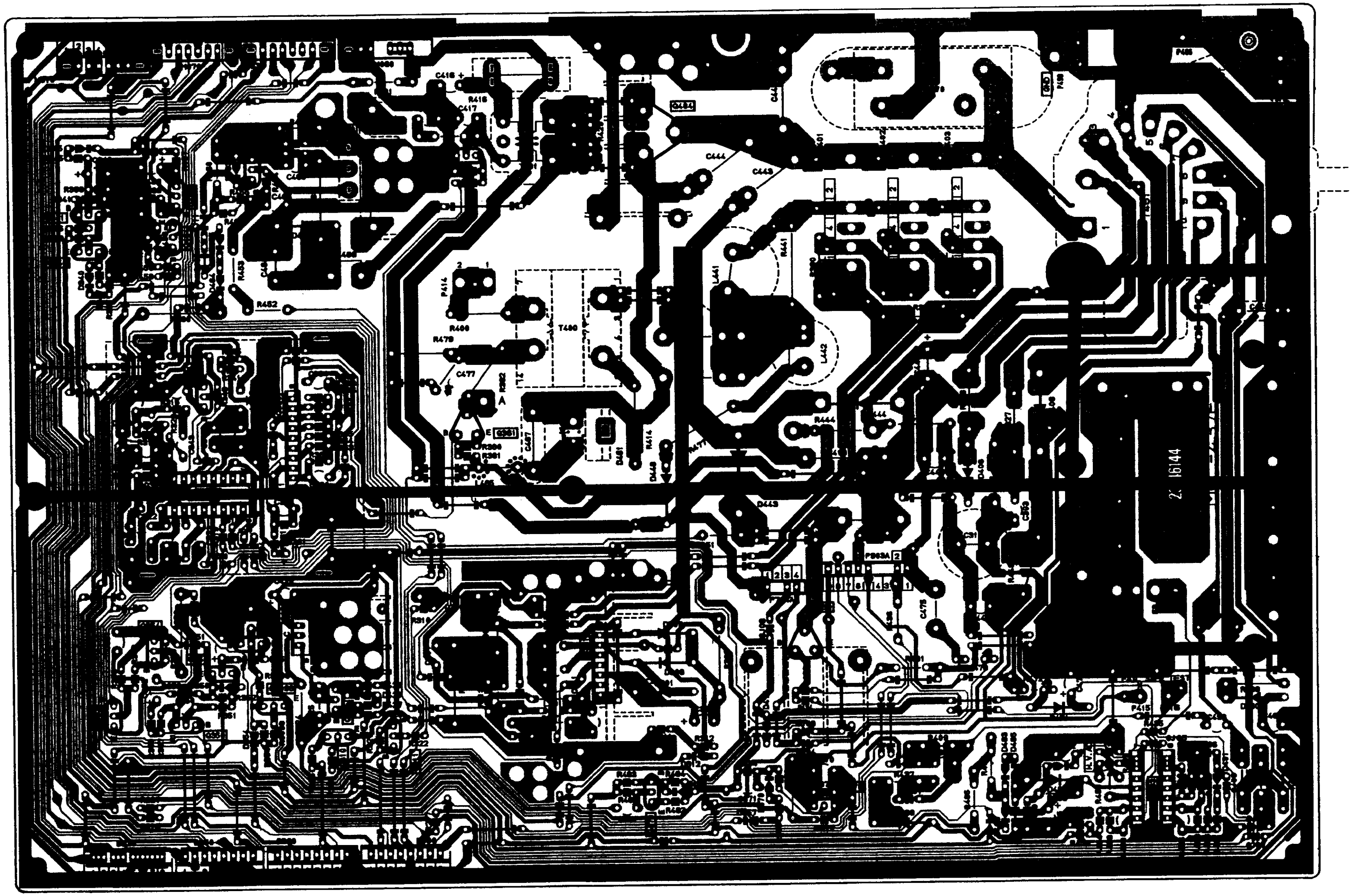
CY03
QG02
QG03
RG20
RG21
Q601
Q613
Q635
Q637
Q661
Q662
C101
C102
C104
C105
C106
C107
C109
C111
C112
C113
C114
C115
C116
C117
C190
C532
C601
C602
C603
C604
C605
C606
C607
C608
C609
C613
C614
C615
C616
C617
C644
C645
C664
C681
C837
C847
D101
D511
D613
D614
D615
D616
D617
D835
D836
D837
D839
G101
G102
L101
L102
L103
L104
L111
L112
L115
L116
R110
R111
R112
R113
R230
R609
R610
R611
R612
R615
R616
R617
R680
R681
R683
R684
R834
R835
R837
R838
R839
R849
AGC
VT
ADR
SCL2
SDA2
NC
+5V
+32V
IF
GND
B
C
E
EXT.CTRL SW

– 56 –

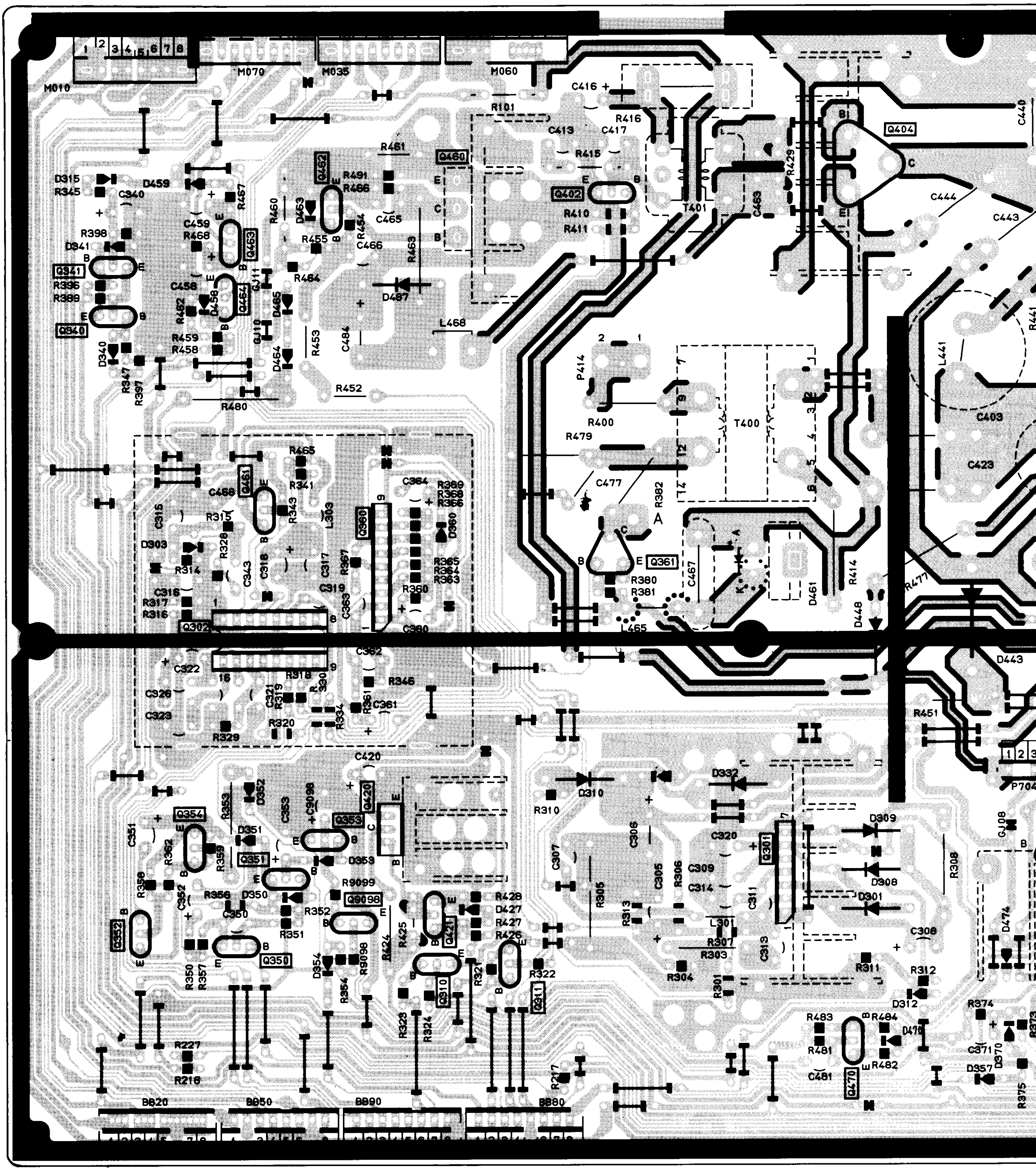
DEF BOARD PB9046

BOTTOM (FOIL) SIDE



DEF BOARD PB9046

BOTTOM (FOIL) SIDE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M060
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Q402
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Q462
Q453
Q454
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Q340
Q461
Q360
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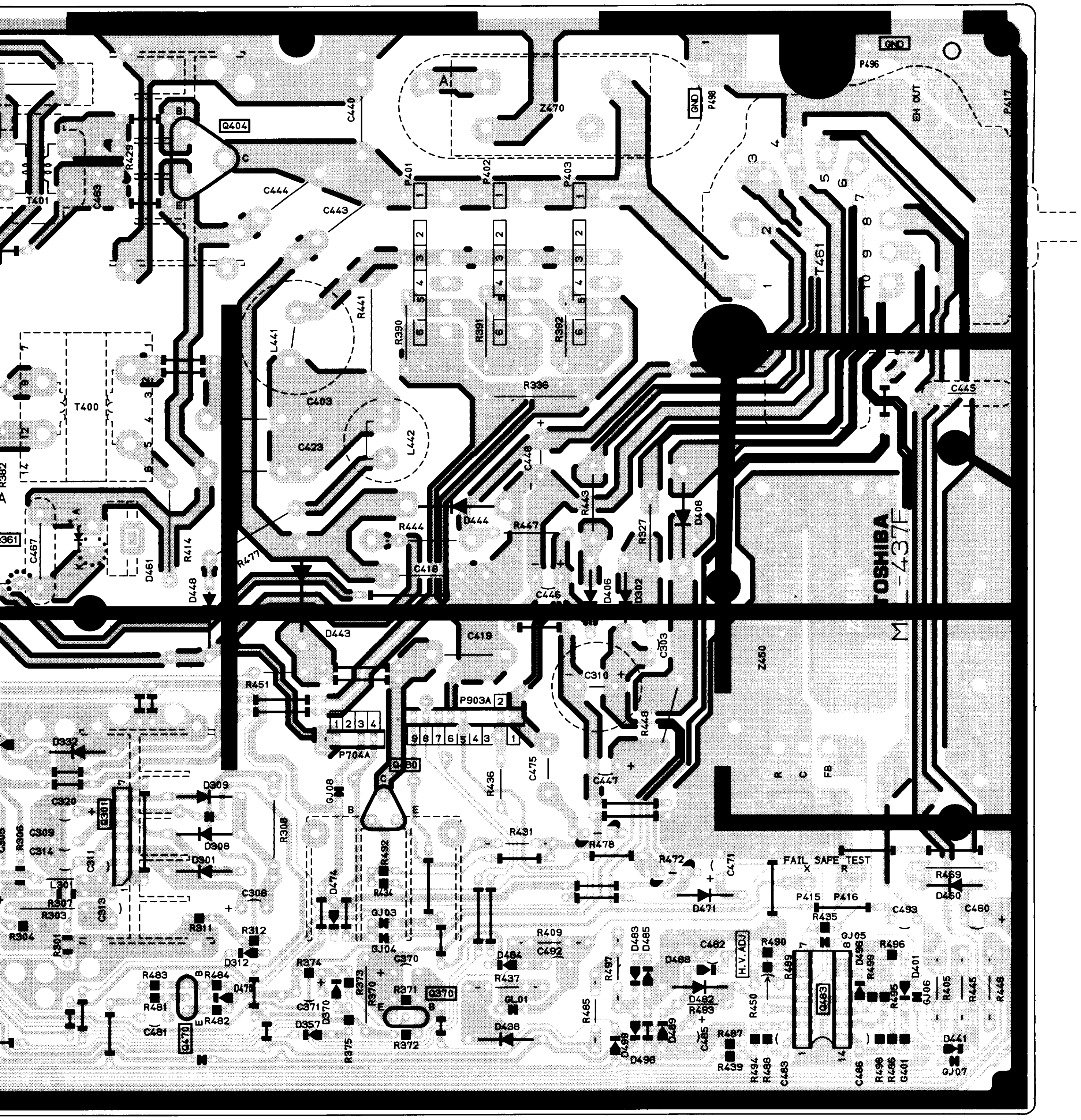
Q361
Q354
Q353
Q420
Q351
Q9098
Q352
Q350
Q421
Q310
Q311
Q301
Q470
T401
T400
P414
P704
C416
C413
C417
C440
C444
C443
C463
C465
C466
C484
C459
C458
C340
C468
C364
C315
C343
C318
C317
C319
C363
C316
C380
C322
C326
C323
C321
C362
C361
C420
C9098
C353
C351
C352
C350
C477
C467
C403
C423
C306
C307
C305
C320
C309
C314
C311
C313
C308
C371
C481
R101
R416
R415
R410
R411
R429
R461
R491
R466
R454
R455
R463
R464
R460
R457
R468
R462
R459
R458
R453
R452
R480
R398
R396
R389
R347
R397
R345
R465
R341
R343
R315
R328
R314
R367
R389
R368
R366
R365
R364
R363
R360
R317
R316
R318
R330
R319
R320
R334
R329
R346
R361
R400
R479
R382
R380
R381
R414
R477
R451
R353
R362
R359
R358
R356
R352
R351
R9099
R9098
R428
R427
R426
R425
R424
R350
R357
R354
R323
R324
R321
R322
R227
R216
R217
R310
R305
R306
R313
R307
R303
R304
R301
R311
R312
R374
R375
R483
R484
R481
R482
R308
D315
D459
D341
D340
D463
D458
D465
D464
D487
D303
D360
D352
D351
D353
D350
D354
D427
D461
D448
D443
D310
D332
D309
D308
D301
D312
D474
D470
D370
D357
L468
L441
L303
L465
L301
GJ11
GJ10
GJ08
B820
B850
B890
B880

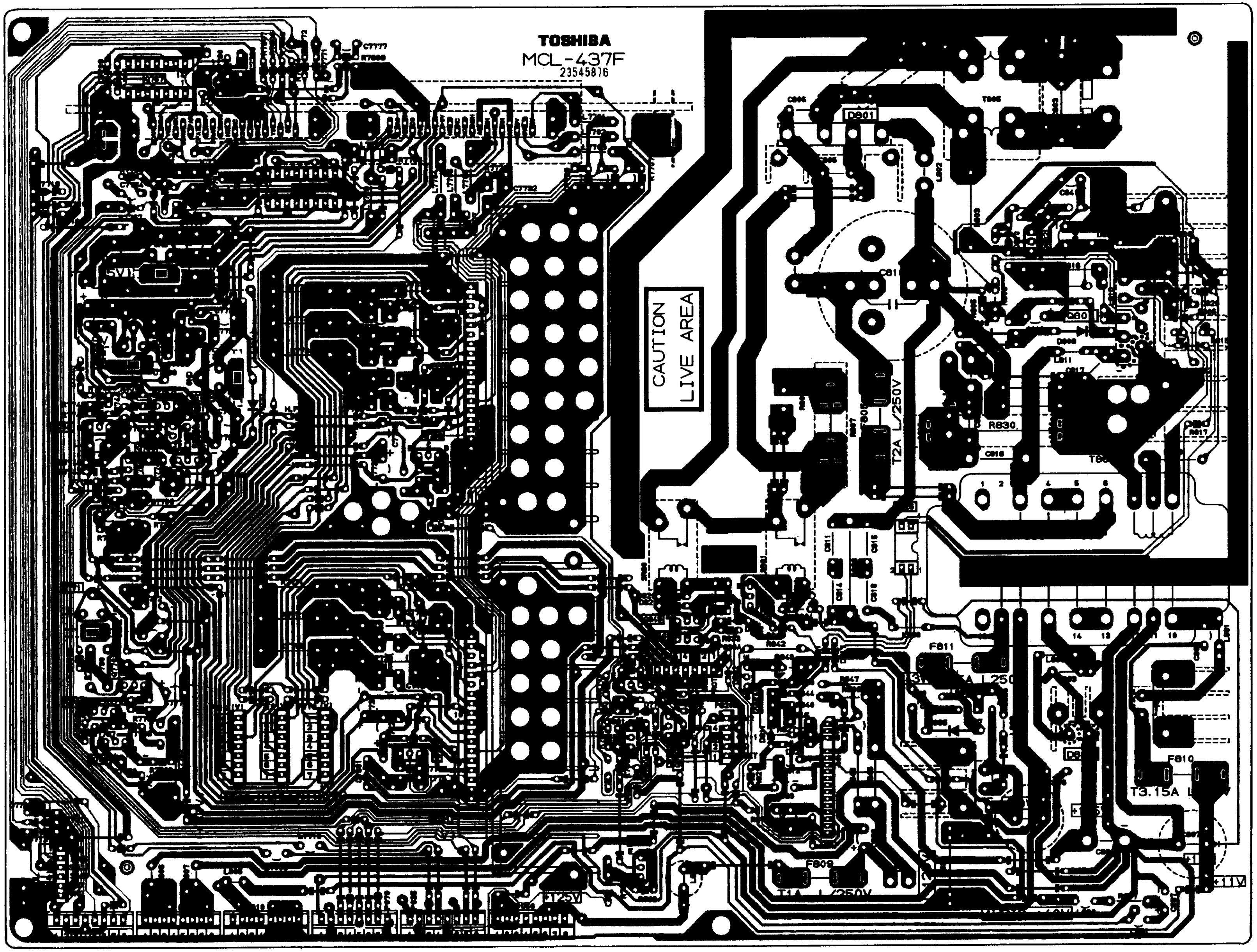
DEF BOARD PB9046

BOTTOM (FOIL) SIDE


Q404
T401
C444
C443
C440
Z470
P401
P402
P403
GND
P496
EH OUT
P417
T461
R390
R391
R392
R441
L441
T400
C403
C423
L442
R336
C445
C448
R443
R327
D408
TOSHIBA
M-437F
R444
D444
R447
C418
D461
R414
R477
D448
C467
C446
D406
D302
D443
C419
C303
Z450
C310
R451
P903A
P704A
R448
Q430
R436
C475
C447
D309
D308
D301
Q301
C320
C309
C314
R306
R308
L301
R307
R303
R304
R301
C311
C313
C308
R311
R312
D312
R431
R478
R472
C471
FAIL SAFE TEST
P415
P416
R469
D460
C493
C460
R435
D474
R492
R434
GJ03
GJ04
GJ08
C370
R374
R373
R370
R371
Q370
C371
D370
D357
R375
R372
R483
R484
R481
R482
C481
Q470
D470
R409
C492
D484
R437
GL01
D438
R497
R485
D483
D485
D488
C482
D482
R493
D499
D496
D489
C485
R487
R439
H.V. ADJ
R490
R489
R450
Q493
GJ05
D486
R496
R499
R495
D401
GJ06
R405
R445
R446
D441
GJ07
R494
R498
C483
C486
G401

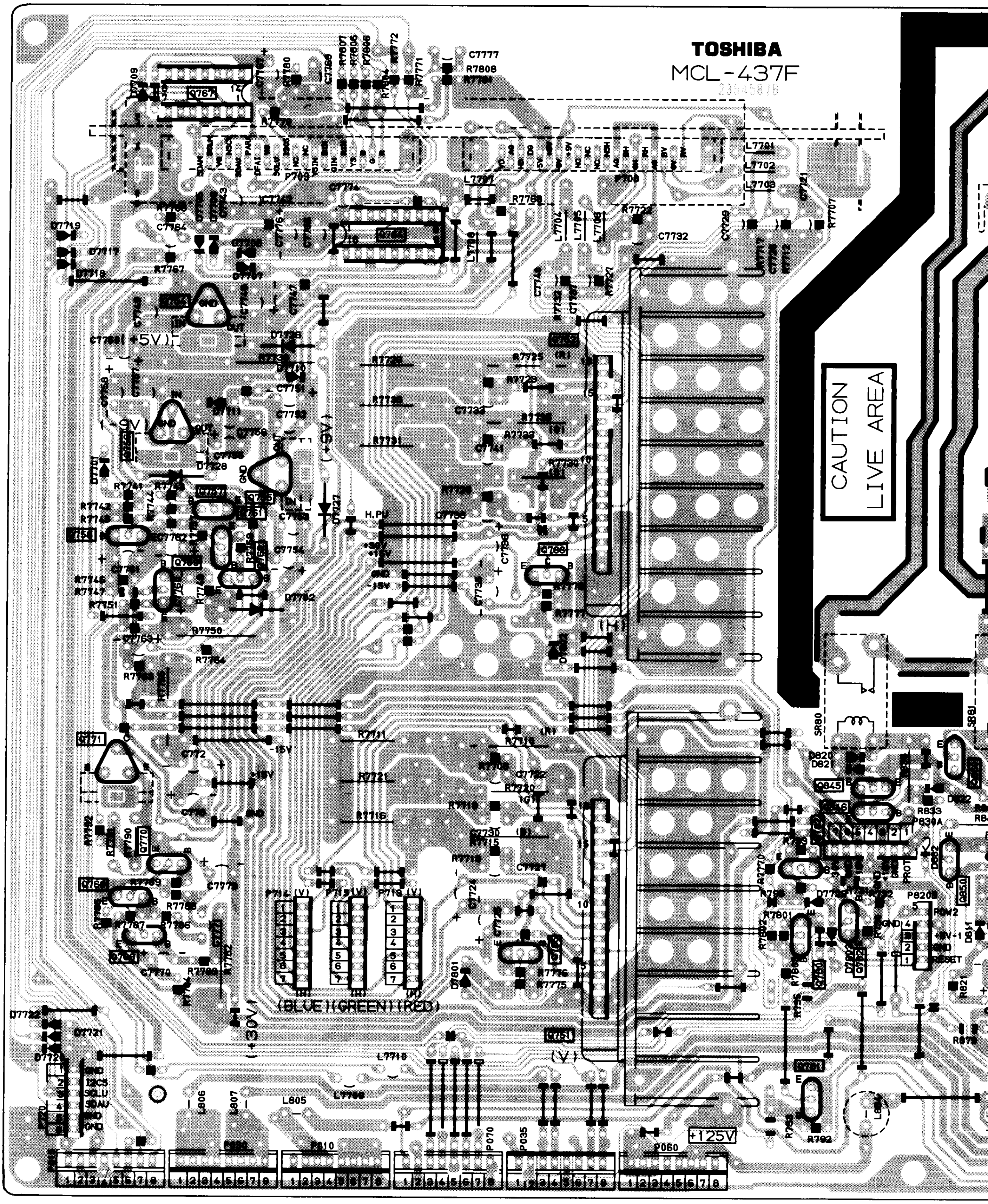
CONV/POWER1 BOARD PB9192

BOTTOM (FOIL) SIDE


TOSHIBA
MCL-437F
23545876
CAUTION
LIVE AREA
D801
T805
C811
D806
R830
C818
T2A L/250V
F811
F810
T3.15A L
F809
T1A L/250V
+11V
+125V

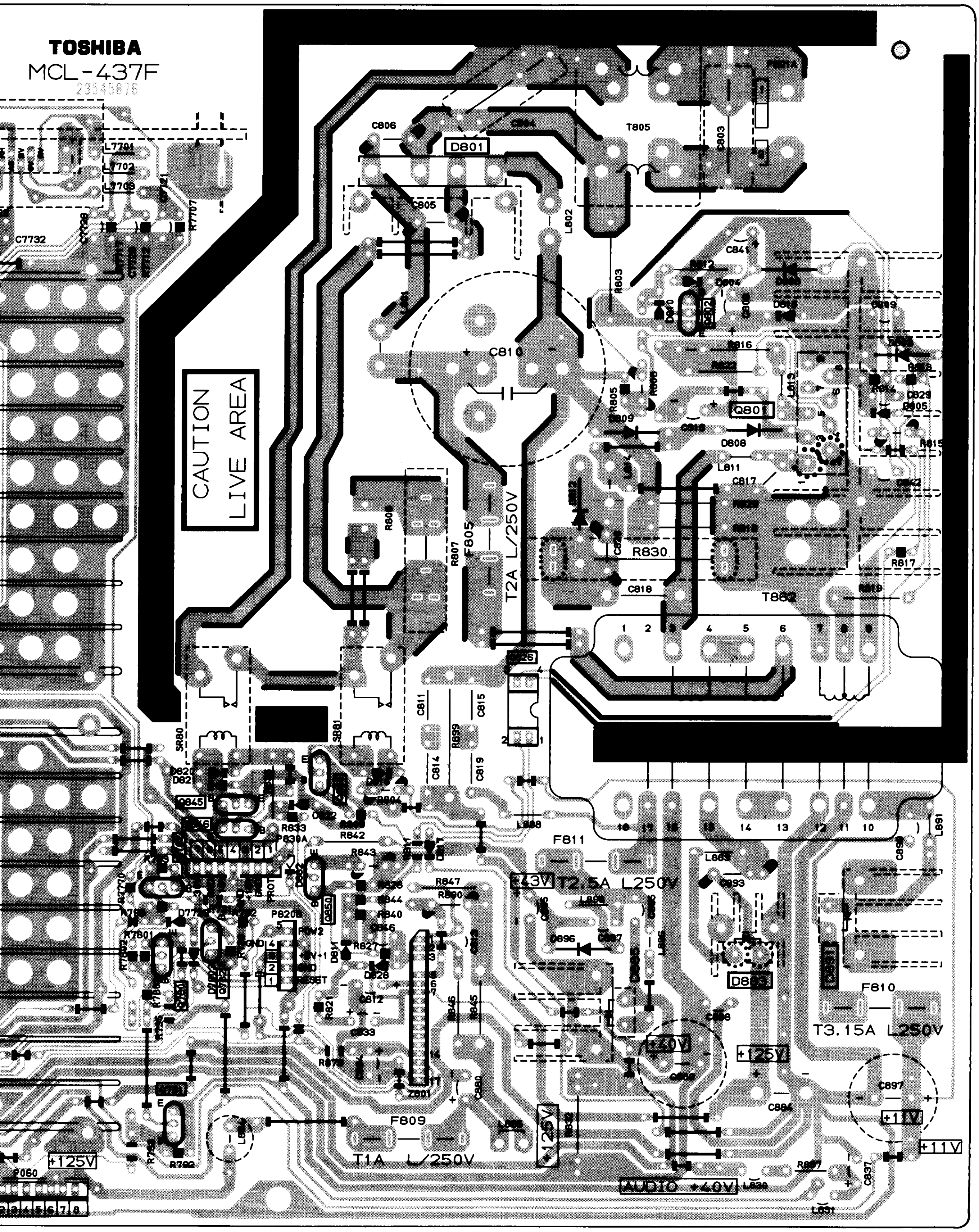
CONV/POWER1 BOARD PB91

BOTTOM (FOIL) SIDE


TOSHIBA
MCL-437F
CAUTION
LIVE AREA
C7777
R7808
P703
P708
L7701
L7702
L7703
L7707
C7732
D7719
D7717
D7718
R7767
C7764
(+5V)
(-9V)
(+9V)
H.PU
+30V
+15V
GND
-15V
D7727
D7728
D7762
C7751
C7752
C7753
C7754
R7750
R7784
Q771
Q770
Q769
C772
C773
-15V
+15V
R7711
R7721
R7716
R7725
R7729
R7726
R7730
C7733
C7736
C7741
Q766
Q751
(V)
(H)
P712 (V)
P715 (V)
P719 (V)
(BLUE) (GREEN) (RED)
(+30V)
D7721
D7722
D7720
GND
I2CS
SCLU
SDAU
GND
GND
P720
L806
L807
L805
L7708
L7710
P070
P035
P060
P030
P010
P015
+125V
SR80
SR81
D820
D821
Q845
Q846
R833
P830A
PROT
D822
Q850
P820B
POW2
+5V-1
GND
RESET
R821
Q781
R792
R793
L804
D7801
R7775
R7776
R7789
R7787
R7786
R7788
C7770
C7779
R7790
R7792
R7741
R7742
R7745
R7746
R7747
R7751
C7763
C7761
C7762
Q754
Q757
Q755
Q761

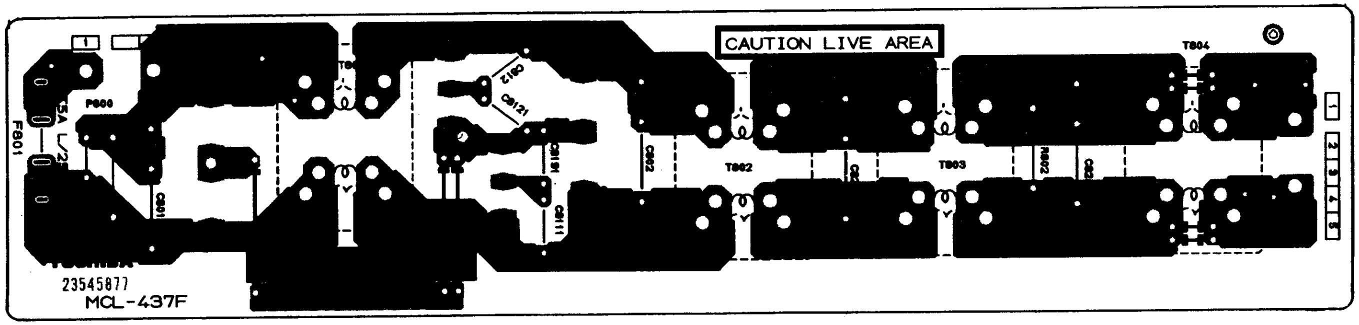
NV/POWER1 BOARD PB9192

BOTTOM (FOIL) SIDE


TOSHIBA
MCL-437F
23545876
L7701
L7702
L7703
C7732
R7707
C806
C804
D801
T805
C803
C805
L802
R803
C841
D804
C810
CAUTION
LIVE AREA
R816
R822
R805
Q801
D809
D808
L811
C817
R830
C818
T862
R817
R819
R808
R807
F805
T2A L/250V
1 2 3 4 5 6 7 8 9
C811
C815
R899
C814
C819
SR80
SR81
D820
D821
Q845
R833
P830A
R842
R843
R847
R890
R844
R840
P820
PGND
+B
RESET
C812
C833
R821
R846
R845
Z801
C880
F809
T1A L/250V
+125V
P060
F811
+43V
T2.5A L250V
L883
C893
C896
C897
D883
F810
T3.15A L250V
+40V
+125V
C886
C897
+11V
+11V
AUDIO +40V
R897
C837
L891
L890
18 17 16 15 14 13 12 11 10
R7801
R782
R7710
D7702
Q7751

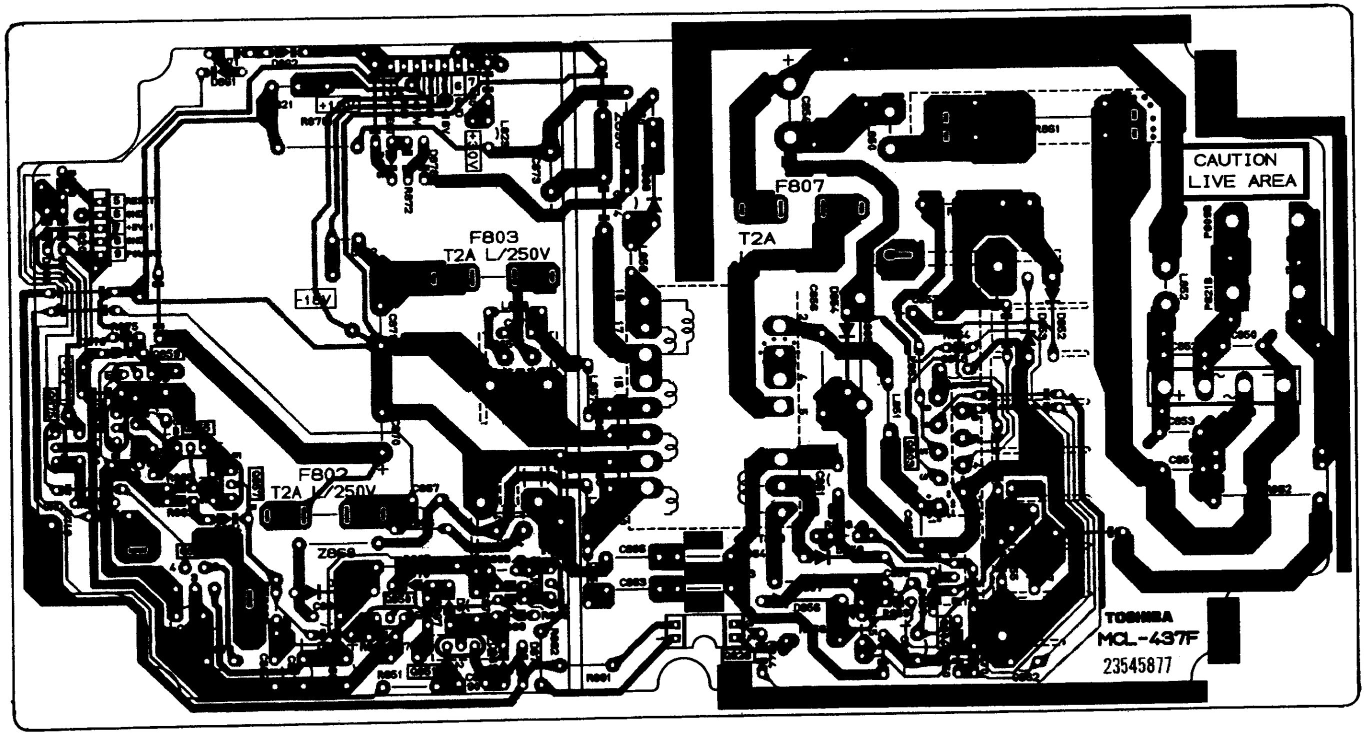
AC-IN BOARD PB9193-2

BOTTOM (FOIL) SIDE


CAUTION LIVE AREA
F801
T804
T802
T803
1
2
3
4
5
23545877
MCL-437F

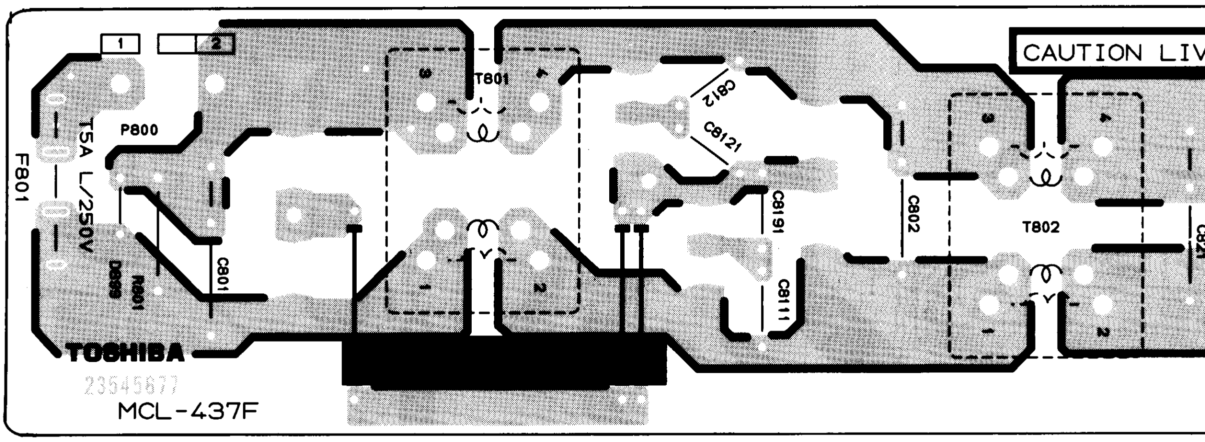
POWER2 BOARD PB9193-1

BOTTOM (FOIL) SIDE


F807
T2A
F803
T2A L/250V
F802
T2A L/250V
+30V
-15V
CAUTION
LIVE AREA
TOSHIBA
MCL-437F
23545877

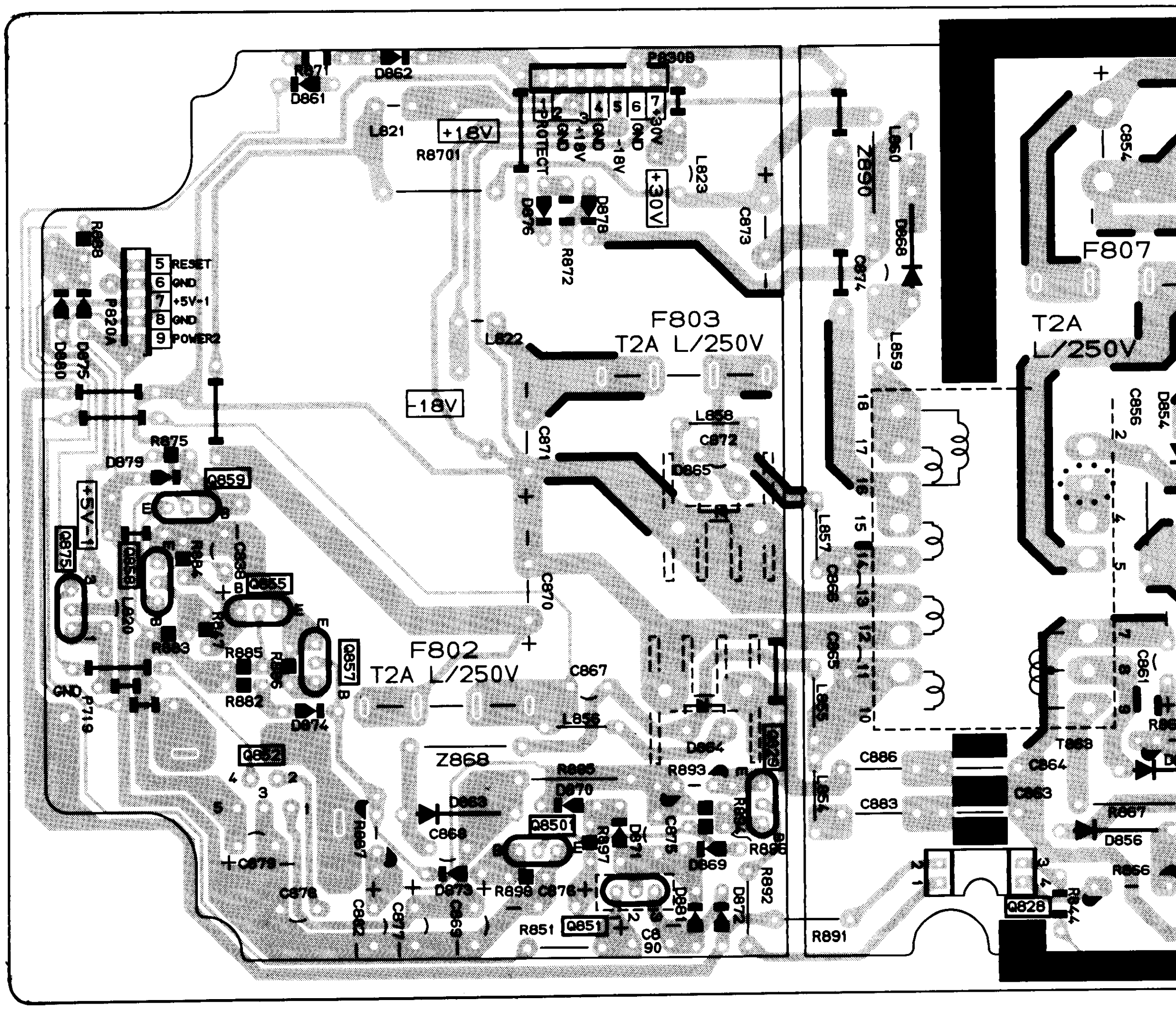
AC-IN BOARD PB9193-2

BOTTOM (FOIL) SIDE


1
2
CAUTION LIV
F801
T5A L/250V
P800
R801
D899
C801
T801
3
4
1
2
C812
C8121
C8191
C8111
C802
T802
TOSHIBA
23545677
MCL-437F

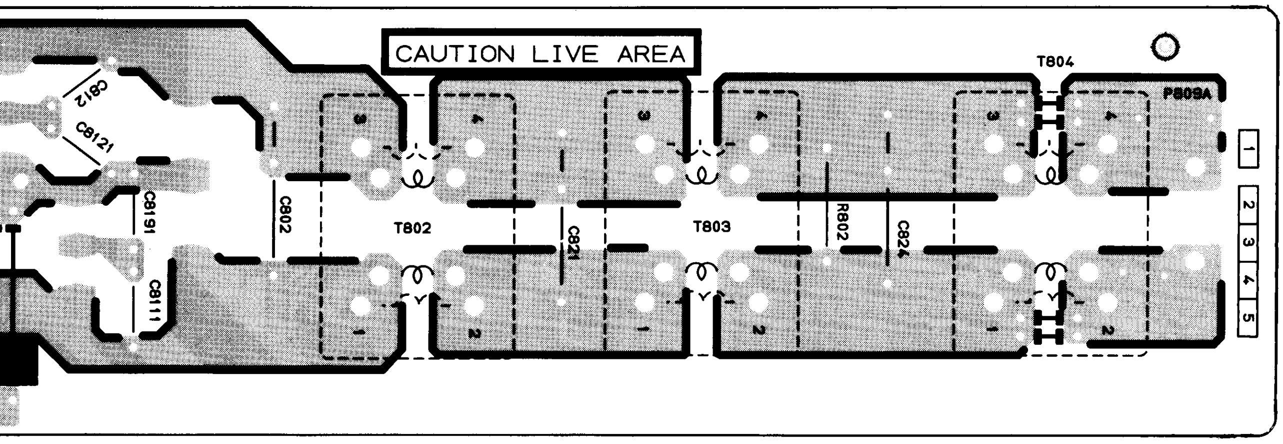
POWER2 BOARD PB9193-

BOTTOM (FOIL) SIDE


D862
D861
P830B
1
2
3
4
5
6
7
PROTECT
GND
+18V
GND
-18V
GND
+30V
L821
+18V
R8701
L823
+30V
D876
D878
R872
C873
Z860
L860
D868
C874
F807
T2A
L/250V
R868
5 RESET
6 GND
7 +5V-1
8 GND
9 POWER2
P820A
D880
D875
F803
T2A L/250V
L822
-18V
L859
C856
D854
L858
C872
C871
D865
R875
D879
Q859
+5V-1
Q875
Q858
R884
C888
Q855
L820
R883
R887
R885
R886
Q857
R882
D874
F802
T2A L/250V
C870
C867
L856
L857
C866
C865
L855
L854
C861
T868
C886
C864
C883
C863
R867
D856
R866
Z868
R895
D870
Q8501
R897
D871
C875
D869
R893
R894
R896
Q829
R892
GND
P719
Q852
C879
C878
R867
D863
C868
D873
R899
C876
C882
C877
C869
R851
Q851
D881
D872
C890
R891
Q828
R844

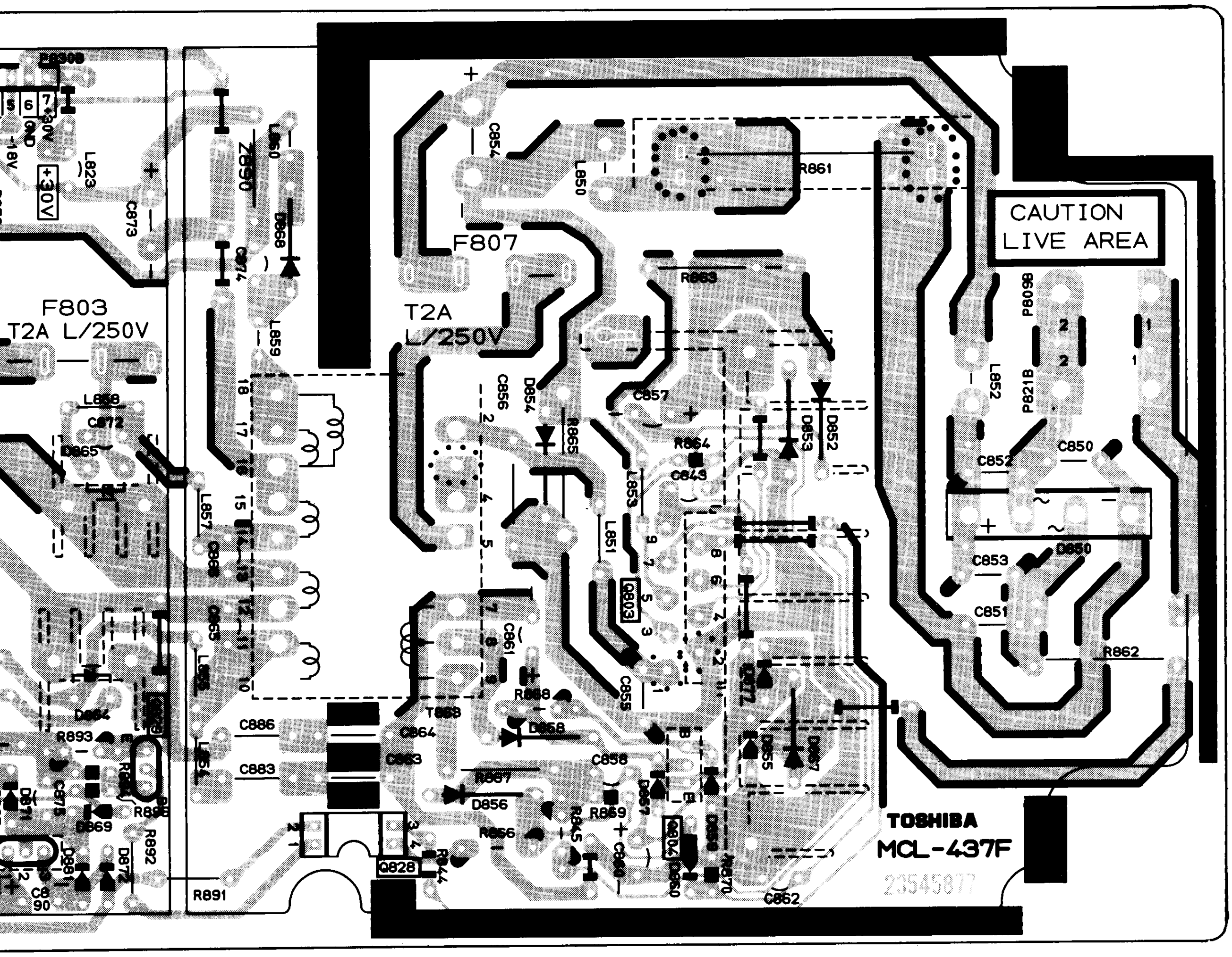
AC-IN BOARD PB9193-2

BOTTOM (FOIL) SIDE


CAUTION LIVE AREA
T804
P809A
C812
C8121
C8191
C8111
C802
T802
C821
T803
R802
C824
1
2
3
4
5

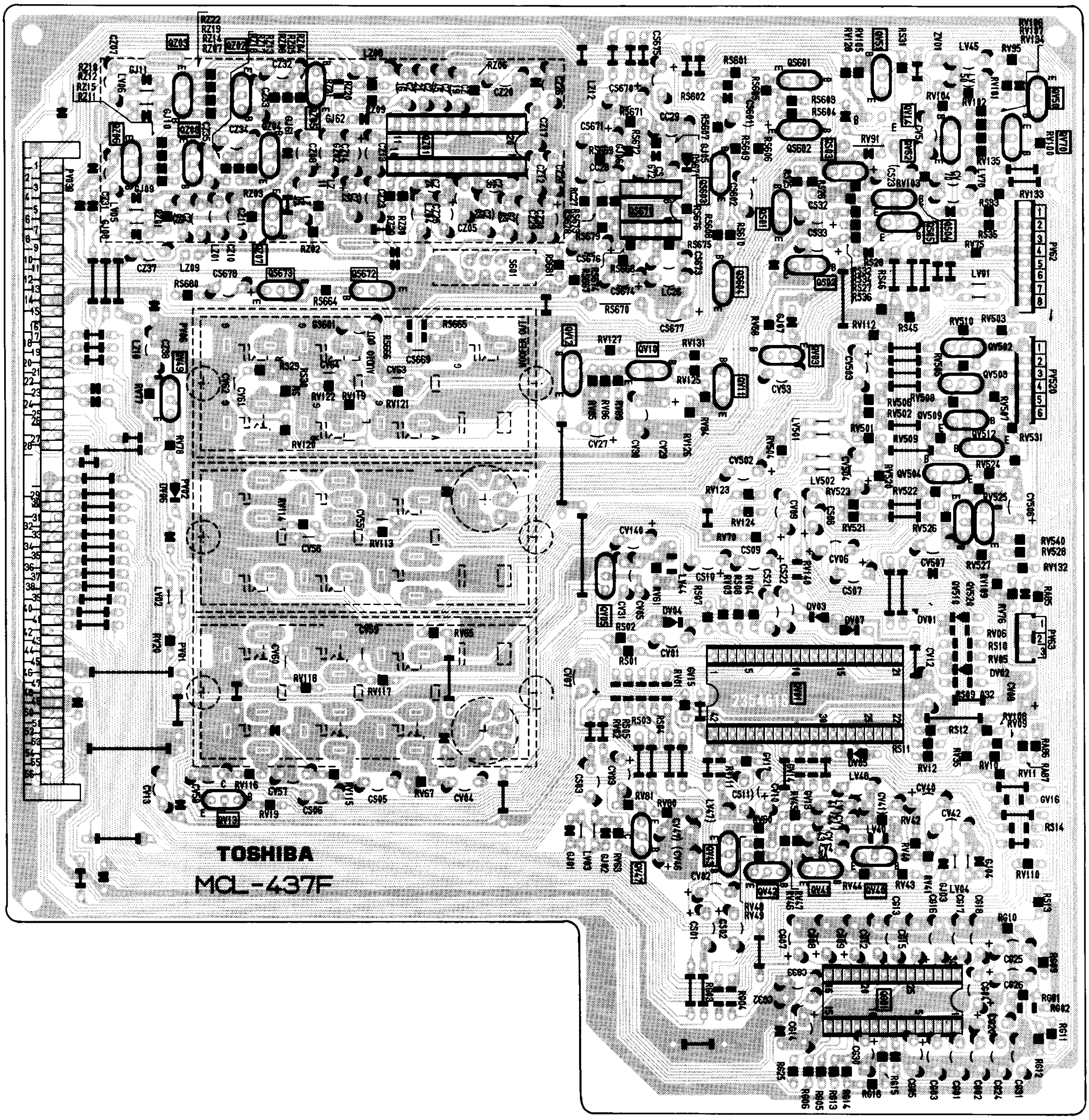
POWER2 BOARD PB9193-1

BOTTOM (FOIL) SIDE


P830B
5
6
7
GND
+30V
-18V
+30V
L823
C873
F803
T2A L/250V
L860
D868
C874
L859
L858
C872
D865
L857
C868
C865
L855
L854
C886
C883
R891
Q828
R844
D864
R893
D871
C875
D869
D881
D872
R892
C890
C854
L850
F807
T2A
L/250V
R861
R863
CAUTION
LIVE AREA
P809B
P821B
L852
C852
C850
C853
D850
C851
R862
C856
D854
R865
C857
R864
C843
L853
L851
Q803
C861
C855
R868
T868
C864
C863
D858
C858
R867
D856
R869
R845
R866
C860
Q804
D860
R870
D852
D853
D855
D857
C877
C862
TOSHIBA
MCL-437F
23545877

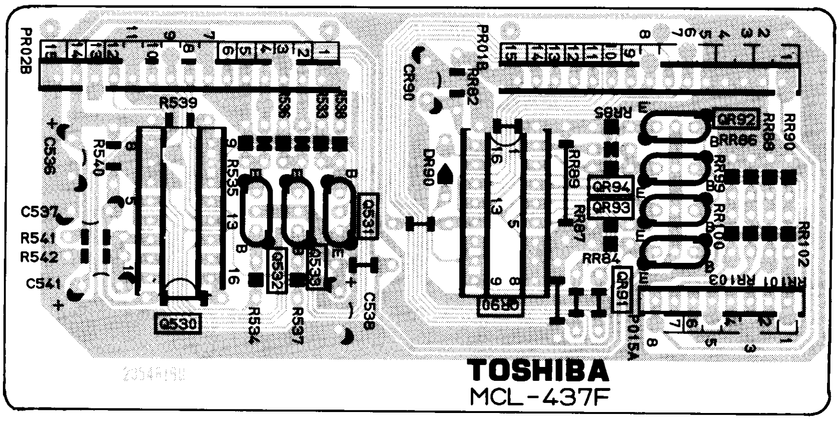
BACK/AV BOARD PB9086-1

BOTTOM (FOIL) SIDE


TOSHIBA
MCL-437F

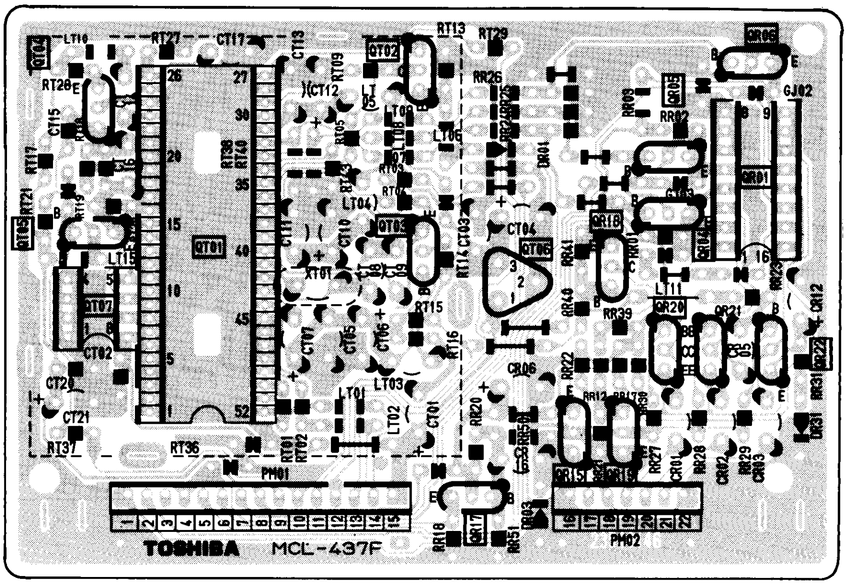
SELECT BOARD PB9086-2

BOTTOM (FOIL) SIDE


PR02B
PR01B
R539
R540
C536
C537
R541
R542
C541
R535
R534
R537
C538
Q530
Q531
Q532
Q533
CR90
RR82
DR90
RR85
RR86
RR88
RR90
RR89
RR87
RR84
RR99
RR100
RR101
RR102
RR103
QR90
QR91
QR92
QR93
QR94
P015A
TOSHIBA
MCL-437F

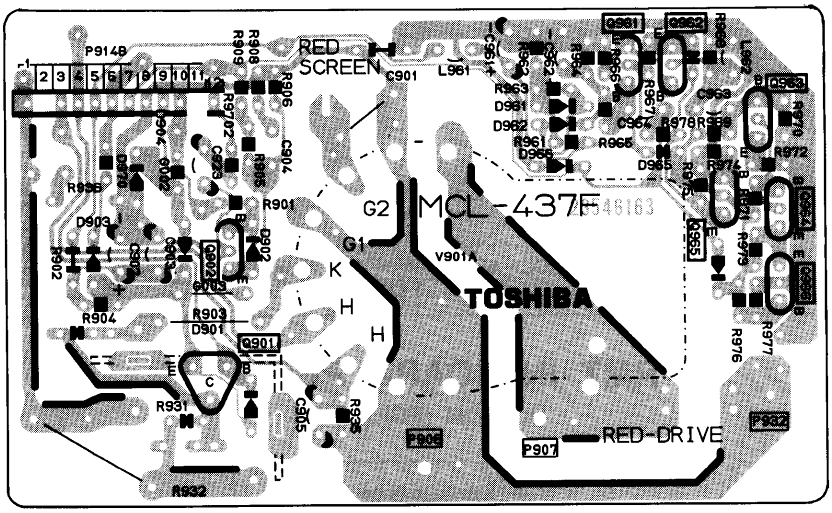
TEXT BOARD PB9058

BOTTOM (FOIL) SIDE


QT04
LT16
RT27
CT17
CT13
RT13
RT29
QR06
QT02
RT28
CT15
CT12
RT09
RT05
RT26
QR05
RR03
RR02
GJ02
RT17
RT21
QT05
RT19
LT15
QT01
RT38
RT40
CT11
LT04
QT03
CT10
XT01
CT03
CT04
QT06
DR01
QR18
QR03
QR01
RR41
RR40
RR39
QR04
RR23
CR12
QT07
CT02
CT20
CT21
CT01
CT05
CT06
RT15
RT16
LT11
QR20
QR21
QR22
RR31
DR31
RR22
CR06
RR20
LT01
LT02
LT03
RT37
RT36
RT01
RT02
PM01
QR15
QR16
RR27
CR01
RR28
CR02
RR29
CR03
RR18
QR17
RR51
DR03
PM02
TOSHIBA
MCL-437F

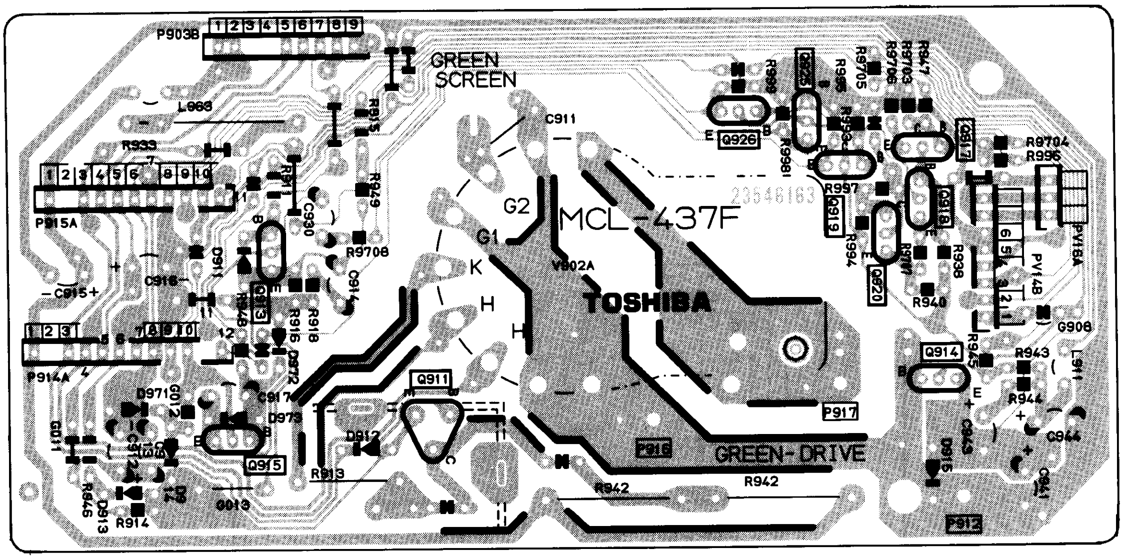
R-DRIVE BOARD PB9090-1

BOTTOM (FOIL) SIDE


P914B
R908
R909
RED
SCREEN
C901
L961
C961
R963
D961
D962
R961
D966
R965
Q961
Q962
L962
Q963
C963
R970
R972
R978
R974
D965
Q964
Q965
Q966
R973
R976
R977
R9702
R906
R905
C904
D904
D902
C923
R936
D970
D903
R901
C902
R902
Q902
Q903
R903
D901
Q901
R904
R931
R932
C905
R935
G2
G1
K
H
MCL-437F
V901A
TOSHIBA
P906
P907
RED-DRIVE
P932
1
2
3
4
5
6
7
8
9
10
11

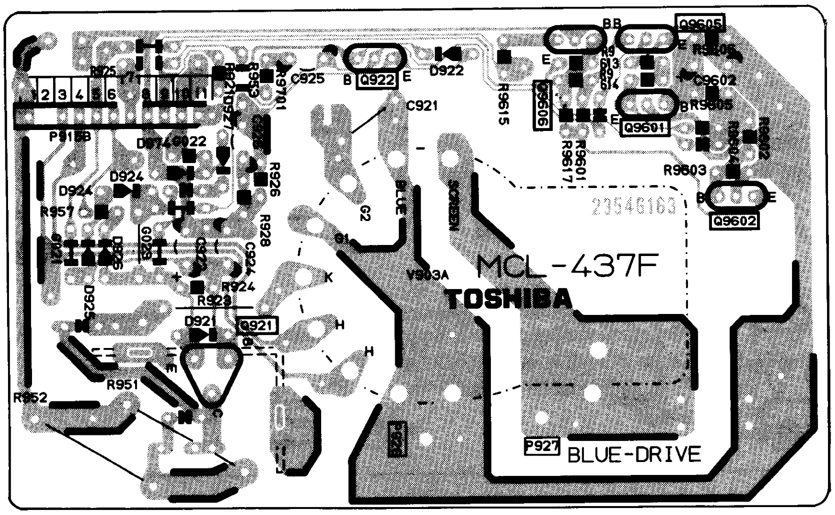
G-DRIVE BOARD PB9090-2

BOTTOM (FOIL) SIDE


P903B
1
2
3
4
5
6
7
8
9
GREEN
SCREEN
L963
R933
R915
R911
C911
R949
C930
R9708
P915A
C915
C916
D911
Q913
R946
R916
R918
C914
D972
P914A
D971
G012
C917
D973
G011
Q915
R945
D913
R914
G013
R913
D912
Q911
R942
G2
G1
K
H
MCL-437F
V902A
TOSHIBA
P917
P918
GREEN-DRIVE
R999
Q925
R998
R9705
R9703
R9706
R947
Q926
R9981
R997
Q919
R994
Q920
Q917
Q918
R9704
R996
PV18A
PV14B
R938
R940
R945
G908
Q914
R943
L911
R944
C943
C944
D915
C941
P912

B-DRIVE BOARD PB9090-3

BOTTOM (FOIL) SIDE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C925
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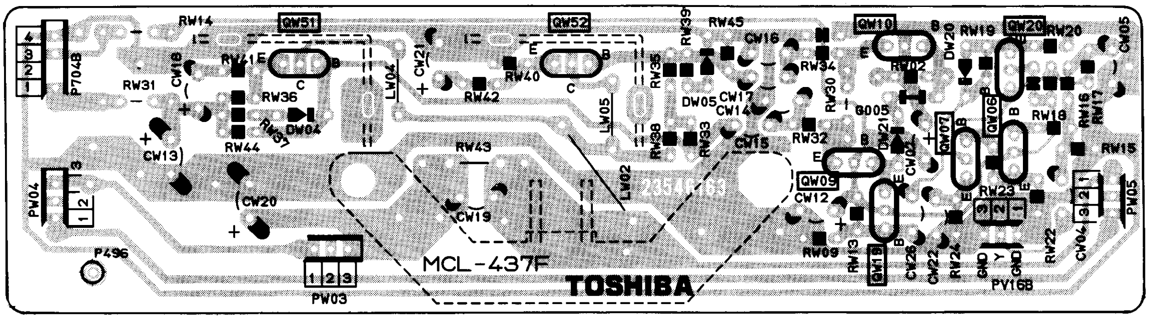
C921
R9701
R959
R9615
Q9606
Q9605
R9606
C9602
Q9601
R9605
R9602
R9604
R9603
R9601
R9617
Q9602
P915B
D974
G022
D924
R957
D926
G023
R926
R928
C924
R924
R923
D925
D921
Q921
R951
R952
G2
G1
K
H
BLUE
SCREEN
MCL-437F
V903A
TOSHIBA
P926
P927
BLUE-DRIVE
1
2
3
4
5
6
7
8
9
10
11

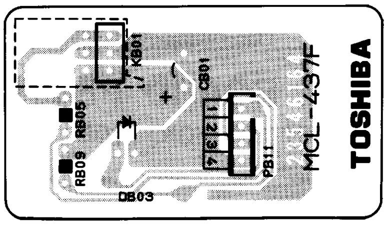
SVM BOARD PB9090-4

BOTTOM (FOIL) SIDE


P704B
RW14
QW51
RW41
RW31
CW18
RW36
DW04
RW37
CW13
RW44
PW04
CW20
P496
PW03
LW04
CW21
RW42
RW40
QW52
LW05
RW43
CW19
MCL-437F
TOSHIBA
LW02
RW39
RW45
RW35
RW38
RW33
DW05
CW17
CW14
CW16
RW34
RW30
CW15
RW32
QW05
CW12
RW09
RW13
QW10
RW02
DW20
QW09
CW25
CW22
RW24
QW07
QW06
RW19
QW20
RW20
RW18
RW16
RW17
RW15
RW23
RW22
CW04
PW05
CW05
GND
Y
PV16B

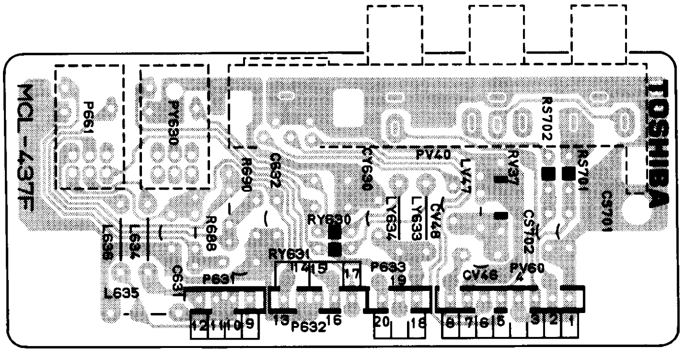
RMT IN BOARD PB9211-1

BOTTOM (FOIL) SIDE


K801
CB01
RB05
RB09
DB03
PB11
MCL-437F
TOSHIBA

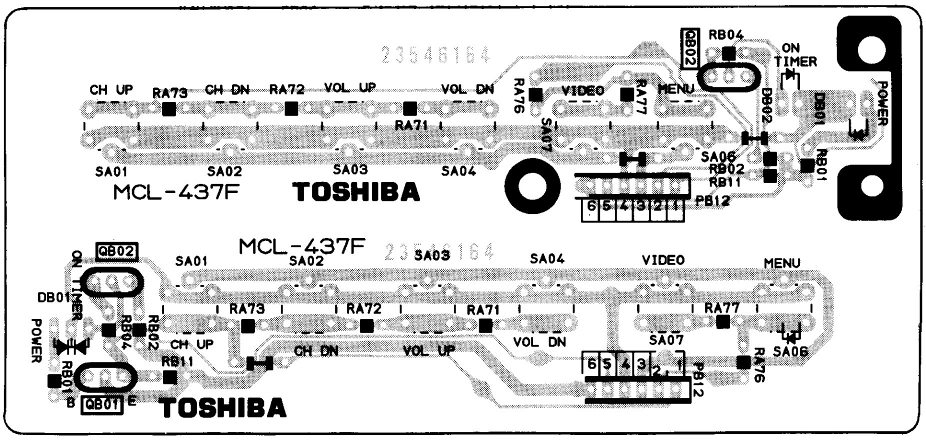
FRONT IN BOARD PB9211-2

BOTTOM (FOIL) SIDE


MCL-437F
P661
PV630
R690
C692
CY630
PV40
LY47
RV37
RS702
RS701
CS701
TOSHIBA
L636
L634
L635
R688
C631
P631
RY630
RY631
P632
LY634
LY633
CV48
P633
CS702
CV48
PV60

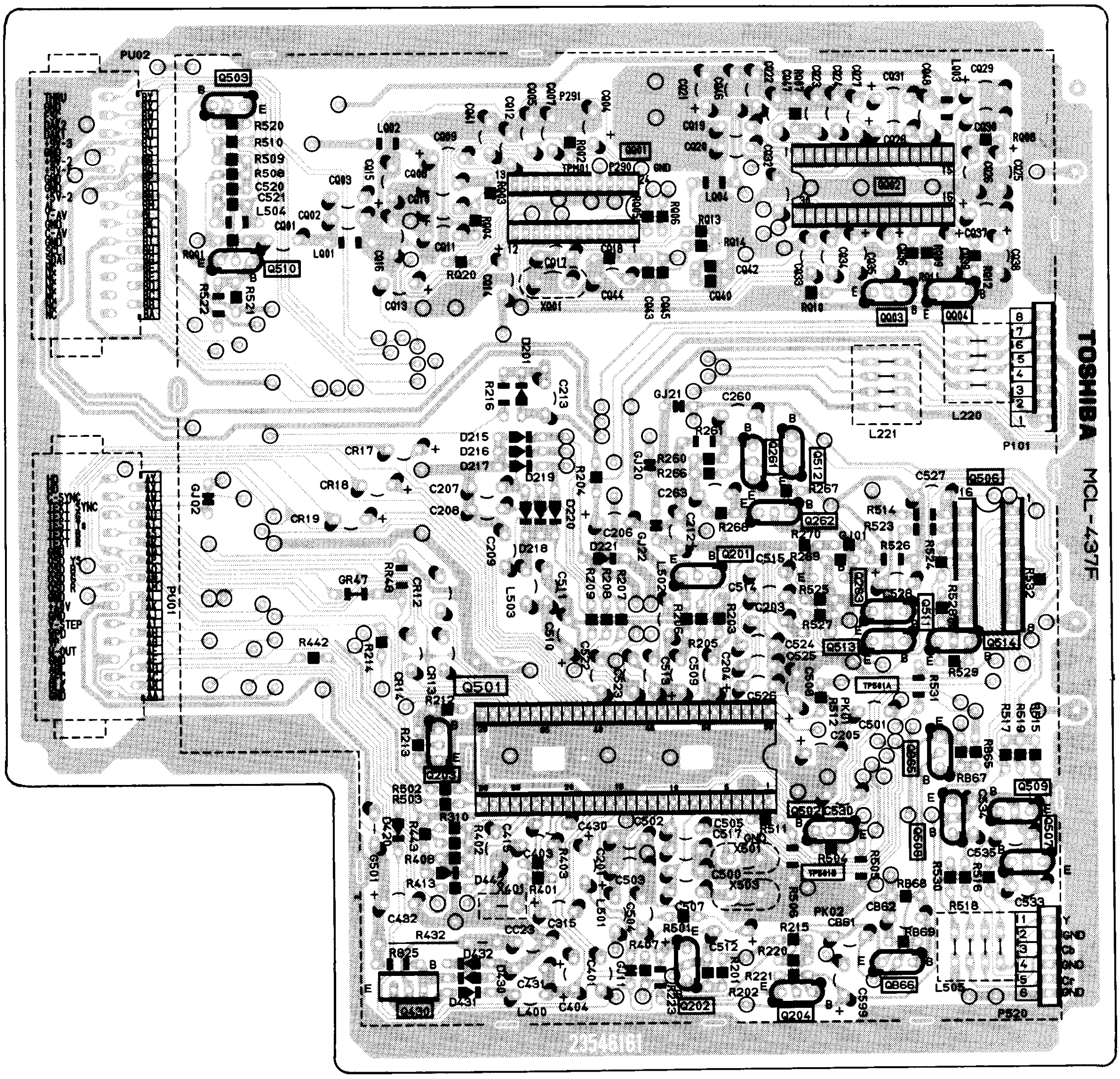
FRONT CONTROL BOARD PB9211-3

BOTTOM (FOIL) SIDE


CH UP
RA73
CH DN
RA72
VOL UP
VOL DN
RA71
RA76
SA07
VIDEO
RA77
MENU
QB02
RB04
ON TIMER
DB02
DB01
POWER
SA01
SA02
SA03
SA04
SA06
RB02
RB11
RB01
PB12
MCL-437F
TOSHIBA
DB01
RB04
RB02
RB11
RB01
QB01
SA07
SA06

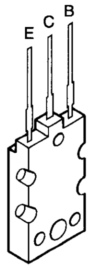
V/C/D BOARD PB9087

BOTTOM (FOIL) SIDE

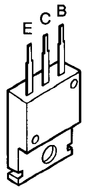

TOSHIBA
MCL-437F
PU02
PU01
P101
P520
L220
L221
Q501
Q503
Q510
Q001
Q002
Q003
Q004
Q201
Q202
Q203
Q204
Q261
Q262
Q263
Q430
Q506
Q509
Q511
Q512
Q513
Q514
23548161

TERMINAL VIEW OF TRANSISTORS

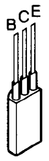
① 2SD2253
(old)
2SC5243



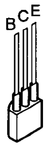
② 2SC3852
2SD1763A
2SC1569
2SC4544
2SA1788
2SA1306
2SA1186A



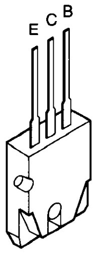
③ 2SC752GTM
2SC2482
2SC2655
2SC4721P



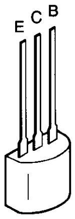
④ 2SC752
2SA562TM
2SA1015
2SC1815
2SC2878
2SC1740S
2SC2120
2SA9335



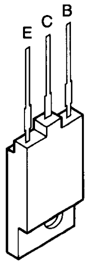
⑤ 2SA1788



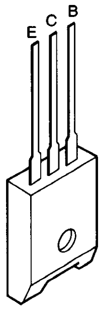
⑥ RN2203
RN2201
RN2004
RN1203
RN1204
RN2204
RN1205
RN1202
RN1201



⑦ 2SD1554
2SD2253
2SD1556
2SC5143
2SD2553



⑧ ON4409



SPECIFICATIONS

Rated voltage		AC 110 V – 240 V, 50/60 Hz					
Power consumption (at AC 220 V, 50 Hz)		220 W (Approx.)					
Dimensions (Width × Height × Depth)		943 mm × 1258 mm × 461 mm					
Mass		(58.5) kg					
Screen size		Type 43 (109 cm)					
Television system (Aerial input)	Channel coverage	**System**		**Channel**	**VHF**	**UHF**	**CATV**
		PAL	B/G	CCIR	2 – 12	21 – 69	X ~ Z+2, S1 ~ S41
		PAL	I	UK	—	21 – 69	—
		PAL	D/K	CHINA	1 – 12	13 – 57	Z–1 ~ Z–38
		SECAM	B/G	CCIR	2 – 12	21 – 69	X ~ Z+2, S1 ~ S41
		SECAM	D/K	OIRT	1 – 12	21 – 69	X1 ~ X19
		NTSC	M	US	2 – 13	14 – 69	A–6 ~ A–1, A ~ W, AA ~ ZZ, AAA, BBB
		NTSC	M	JAPAN	1 – 12	13 – 62	M1 ~ M10, S1 ~ S41
	Special RF signal	**Colour system**		**Sound system**			
		4.43NTSC		5.5/6.0/6.5 MHz			
		PAL 60Hz		5.5/6.0/6.5 MHz			
Colour system		PAL/SECAM/4.43NTSC/3.58NTSC					
Sound output		14 W + 14 W					
Accessories		• Remote control unit × 1 • Battery (R03, AAA) × 2					

* Please refer to owner's manual in detail.

SCHEMATIC DIAGRAM MODEL : 50N9UXE / 50N9UXH (1/6) 50N9UXA / 50N9UXM

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 3. Do not degrade the safety of the receiver through improper servicing.

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position. Set other controls for best picture.

NOTES:

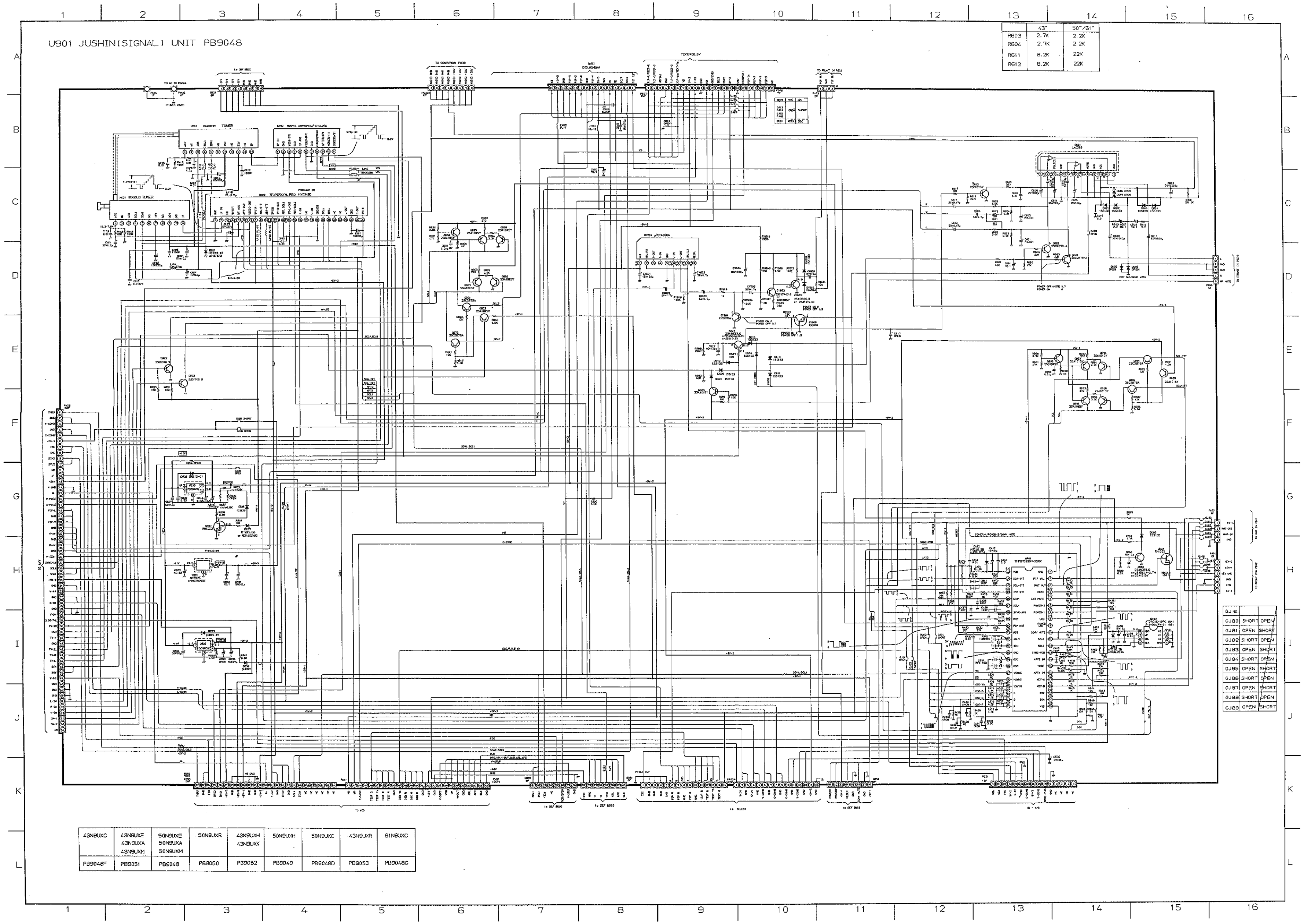
1. D.C. resistance value of a principal transformer is shown in this schematic diagram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH, and the values less than 1 in H.

040-9909



	43"	50"/61"
R603	2.7K	2.2K
R604	2.7K	2.2K
R611	8.2K	22K
R612	8.2K	22K

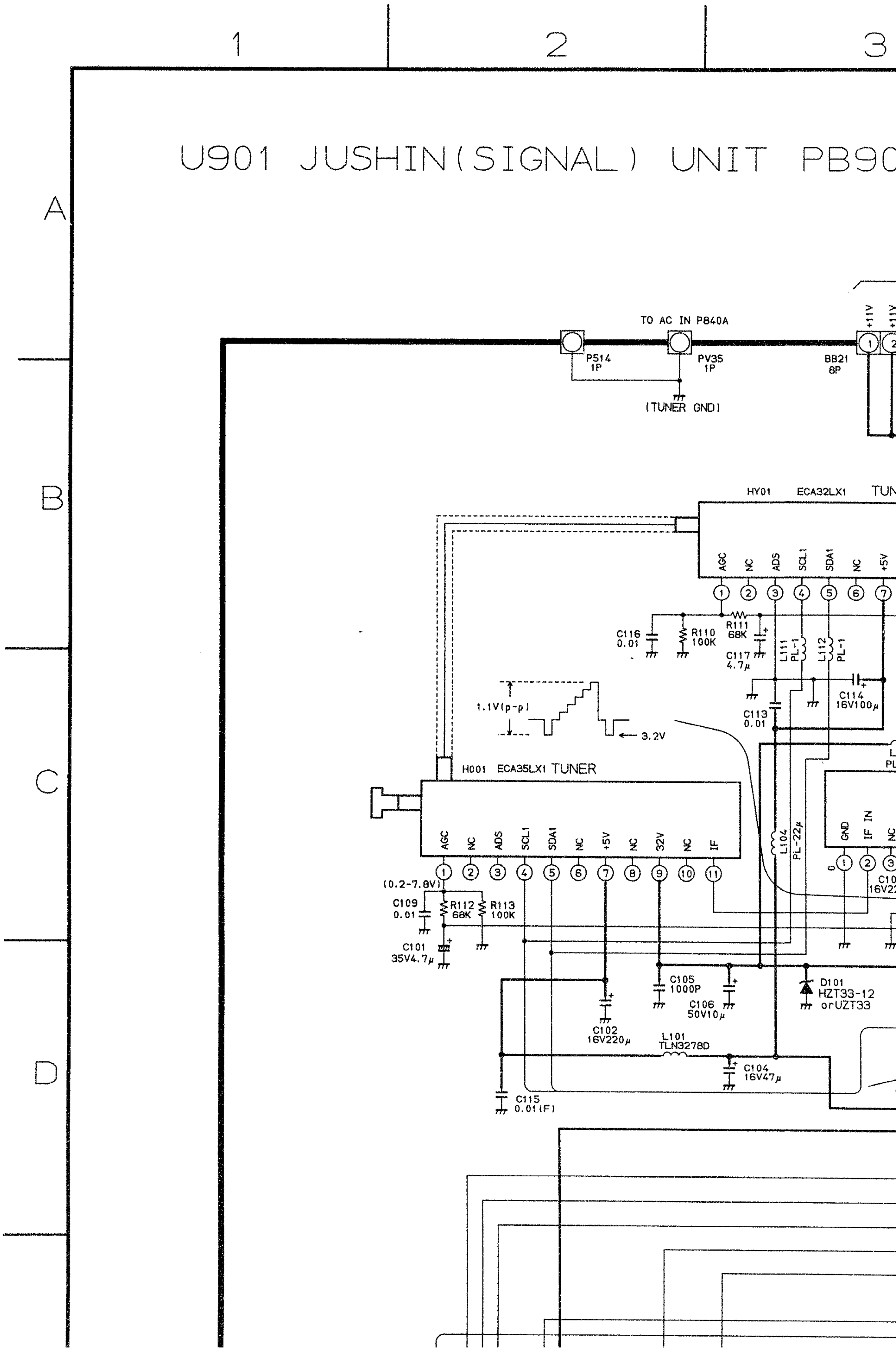
GJ NO.		
GJ80	SHORT	OPEN
GJ81	OPEN	SHORT
GJ82	SHORT	OPEN
GJ83	OPEN	SHORT
GJ84	SHORT	OPEN
GJ85	OPEN	SHORT
GJ86	SHORT	OPEN
GJ87	OPEN	SHORT
GJ88	SHORT	OPEN
GJ89	OPEN	SHORT

43N9UXC	43N9UXE 43N9UXA 43N9UXM	50N9UXE 50N9UXA 50N9UXM	50N9UXR	43N9UXH 43N9UXK	50N9UXH	50N9UXC	43N9UXR	61N9UXC
PB9048F	PB9051	PB9048	PB9050	PB9052	PB9049	PB9048D	PB9053	PB9048G

SCHEMATIC DIAGRAM MODEL : 50N9UXE / 50N9UXH
50N9UXA / 50N9UXM

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical
those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical
with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on pa
3. Do not degrade the safety of the receiver through improper servicing.

040-9909


1
2
3
A
B
C
D
U901 JUSHIN(SIGNAL) UNIT PB90
TO AC IN P840A
P514 1P
PV35 1P
(TUNER GND)
BB21 8P
+11V
+11V
HY01 ECA32LX1 TUN
AGC
NC
ADS
SCL1
SDA1
NC
+5V
C116 0.01
R110 100K
R111 68K
C117 4.7μ
L111 PL-1
L112 PL-1
C114 16V100μ
C113 0.01
1.1V(p-p)
3.2V
H001 ECA35LX1 TUNER
AGC
NC
ADS
SCL1
SDA1
NC
+5V
NC
32V
NC
IF
(0.2-7.8V)
C109 0.01
R112 68K
R113 100K
C101 35V4.7μ
L104 PL-22μ
GND
IF IN
NC
C105 1000P
C106 50V10μ
D101 HZT33-12 orUZT33
C102 16V220μ
L101 TLN3278D
C104 16V47μ
C115 0.01(F)

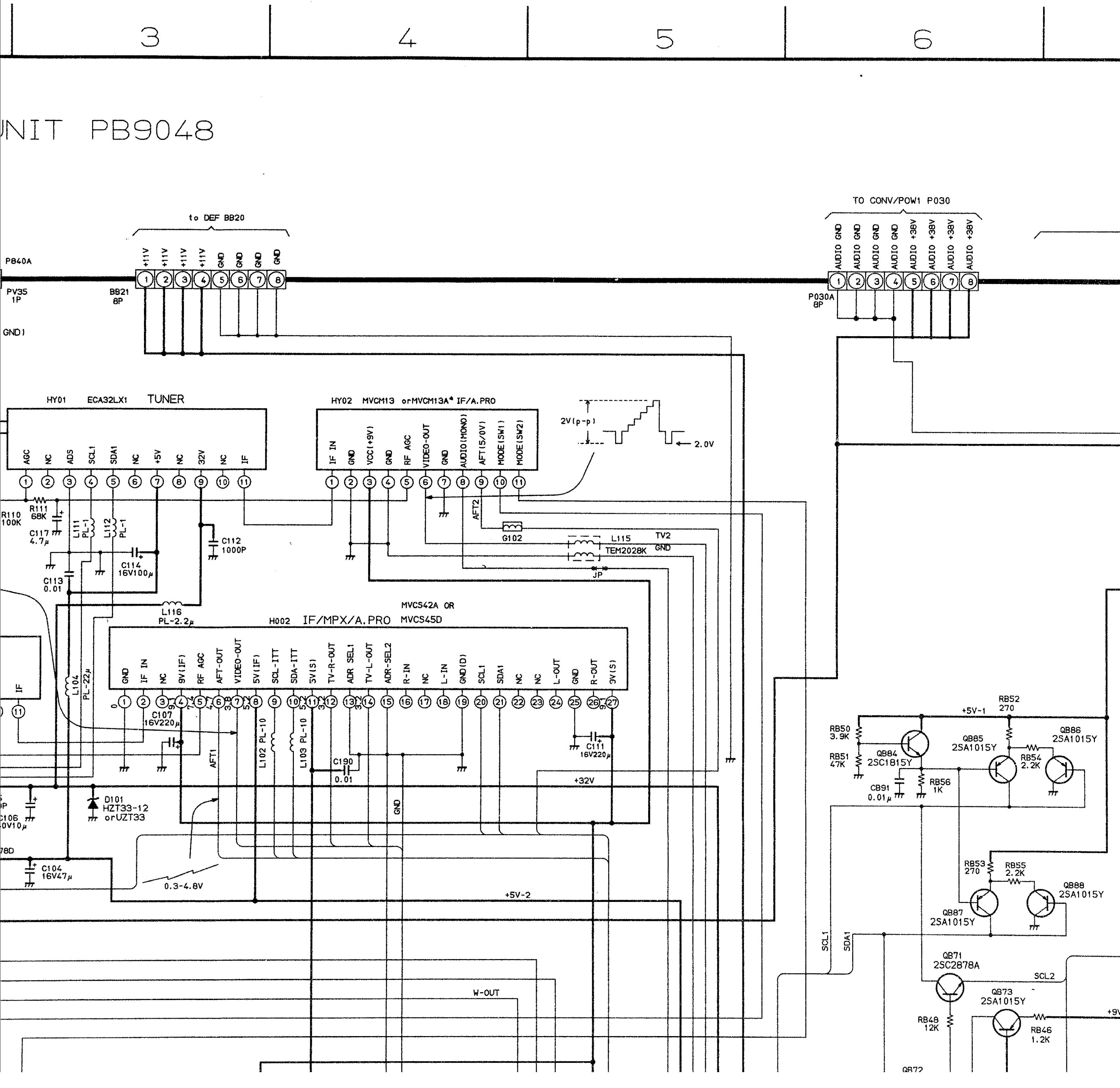
50N9UXH (1/6)

50N9UXM

designate com-
vith types identical to
is to be identical
TY NOTICE on page

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position. Set other controls for best picture.



3
4
5
6
NIT PB9048
to DEF BB20
+11V
GND
P840A
PV35 1P
BB21 8P
GND1
TO CONV/POW1 P030
AUDIO GND
AUDIO +38V
P030A 8P
HY01 ECA32LX1 TUNER
AGC
NC
ADS
SCL1
SDA1
+5V
32V
IF
HY02 MVCM13 or MVCM13A* IF/A.PRO
IF IN
GND
VCC(+9V)
RF AGC
VIDEO-OUT
AUDIO(MONO)
AFT(5/0V)
MODE(SW1)
MODE(SW2)
2V(p-p)
2.0V
R110 100K
R111 68K
C117 4.7μ
L111 PL-1
L112 PL-1
C112 1000P
C114 16V100μ
C113 0.01
AFT2
G102
L115 TEM2028K
TV2
GND
JP
L116 PL-2.2μ
H002 IF/MPX/A.PRO
MVCS42A OR MVCS45D
GND
IF IN
NC
9V(IF)
RF AGC
AFT-OUT
VIDEO-OUT
5V(IF)
SCL-ITT
SDA-ITT
5V(S)
TV-R-OUT
ADR SEL1
TV-L-OUT
ADR-SEL2
R-IN
L-IN
GND(D)
SCL1
SDA1
L-OUT
R-OUT
9V(S)
L104 PL-22μ
C107 16V220μ
AFT1
L102 PL-10
L103 PL-10
C190 0.01
C111 16V220μ
+32V
GND
D101 HZT33-12 or UZT33
C106 10V10μ
C104 16V47μ
0.3-4.8V
+5V-2
W-OUT
SCL1
SDA1
+5V-1
RB52 270
RB50 3.9K
RB51 47K
QB84 2SC1815Y
QB85 2SA1015Y
QB86 2SA1015Y
RB54 2.2K
RB56 1K
CB91 0.01μ
RB53 270
RB55 2.2K
QB87 2SA1015Y
QB88 2SA1015Y
QB71 2SC2878A
SCL2
QB73 2SA1015Y
RB48 12K
RB46 1.2K
QB72
+9V

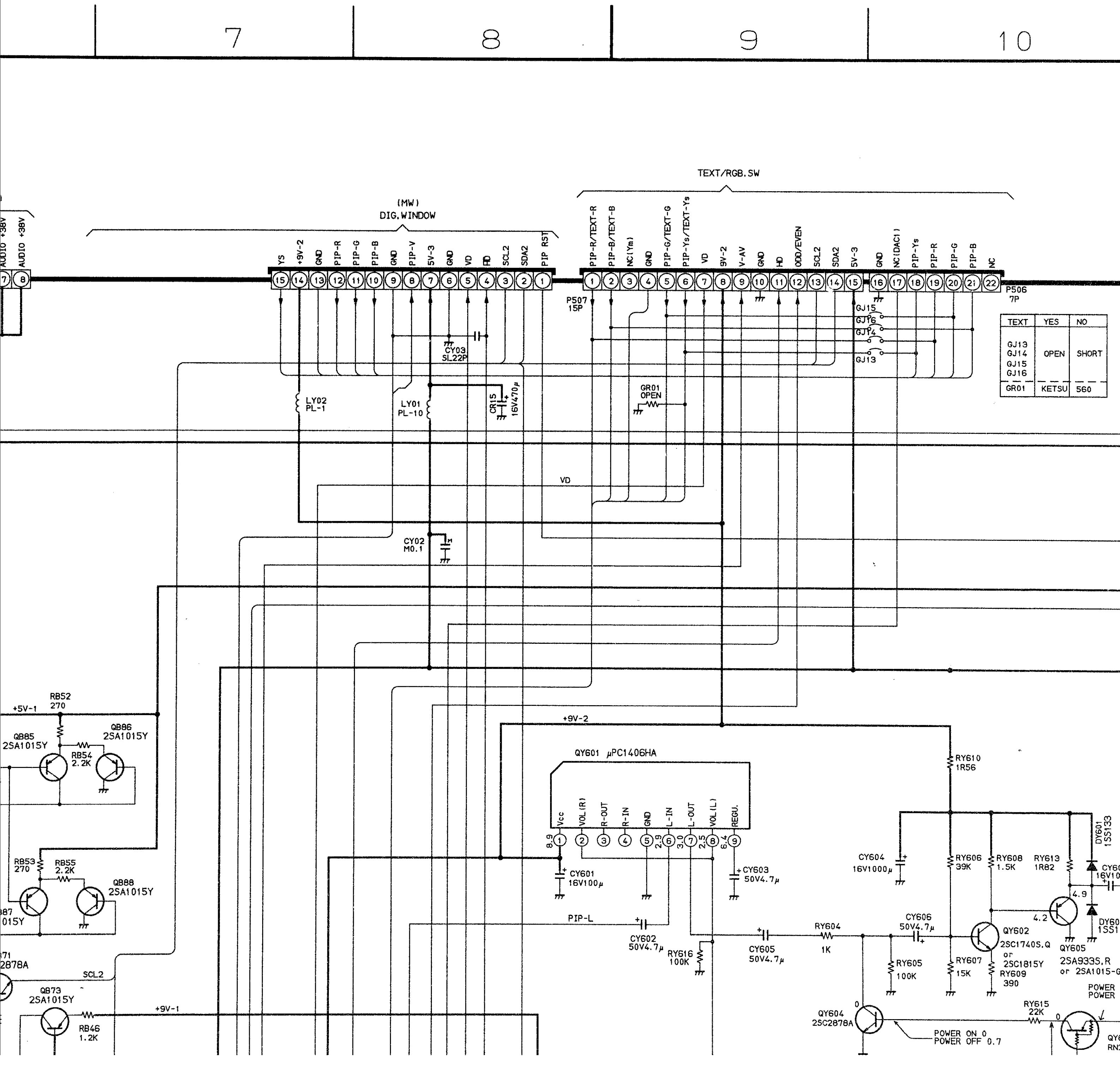
l, line voltage 220

w capacity probe.

mid position and
r controls for best

NOTES:

1. D.C. resistance value of a principal transformer is shown in this schem gram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.


7
8
9
10
AUDIO +38V
AUDIO +38V
(MW)
DIG.WINDOW
YS
+9V-2
GND
PIP-R
PIP-G
PIP-B
GND
PIP-V
5V-3
GND
VD
HD
SCL2
SDA2
PIP RST
TEXT/RGB.SW
PIP-R/TEXT-R
PIP-B/TEXT-B
NC(Ym)
GND
PIP-G/TEXT-G
PIP-Ys/TEXT-Ys
VD
9V-2
V-AV
GND
HD
ODD/EVEN
SCL2
SDA2
5V-3
GND
NC(DAC1)
PIP-Ys
PIP-R
PIP-G
PIP-B
NC
P507
15P
P506
7P
GJ15
GJ16
GJ14
GJ13
TEXT | YES | NO
GJ13 GJ14 GJ15 GJ16 | OPEN | SHORT
GR01 | KETSU | 560
CY03
SL22P
LY02
PL-1
LY01
PL-10
CR15
16V470µ
GR01
OPEN
VD
CY02
M0.1
RB52
270
+5V-1
QB85
2SA1015Y
QB86
2SA1015Y
RB54
2.2K
RB53
270
RB55
2.2K
QB88
2SA1015Y
015Y
2878A
SCL2
QB73
2SA1015Y
RB46
1.2K
+9V-1
+9V-2
QY601 µPC1406HA
Vcc
VOL(R)
R-OUT
R-IN
GND
L-IN
L-OUT
VOL(L)
REGU.
8.9
2.9
3.0
2.5
6.4
CY601
16V100µ
CY603
50V4.7µ
PIP-L
CY602
50V4.7µ
RY616
100K
CY605
50V4.7µ
RY604
1K
CY606
50V4.7µ
RY605
100K
RY610
1R56
CY604
16V1000µ
RY606
39K
RY608
1.5K
RY613
1R82
DY601
1SS133
4.9
4.2
QY602
2SC1740S.Q
or
2SC1815Y
QY605
2SA933S.R
or 2SA1015-G
RY607
15K
RY609
390
RY615
22K
QY604
2SC2878A
POWER ON 0
POWER OFF 0.7
POWER
POWER
0
0

er is shown in this schematic dia-
he circuit.
e.

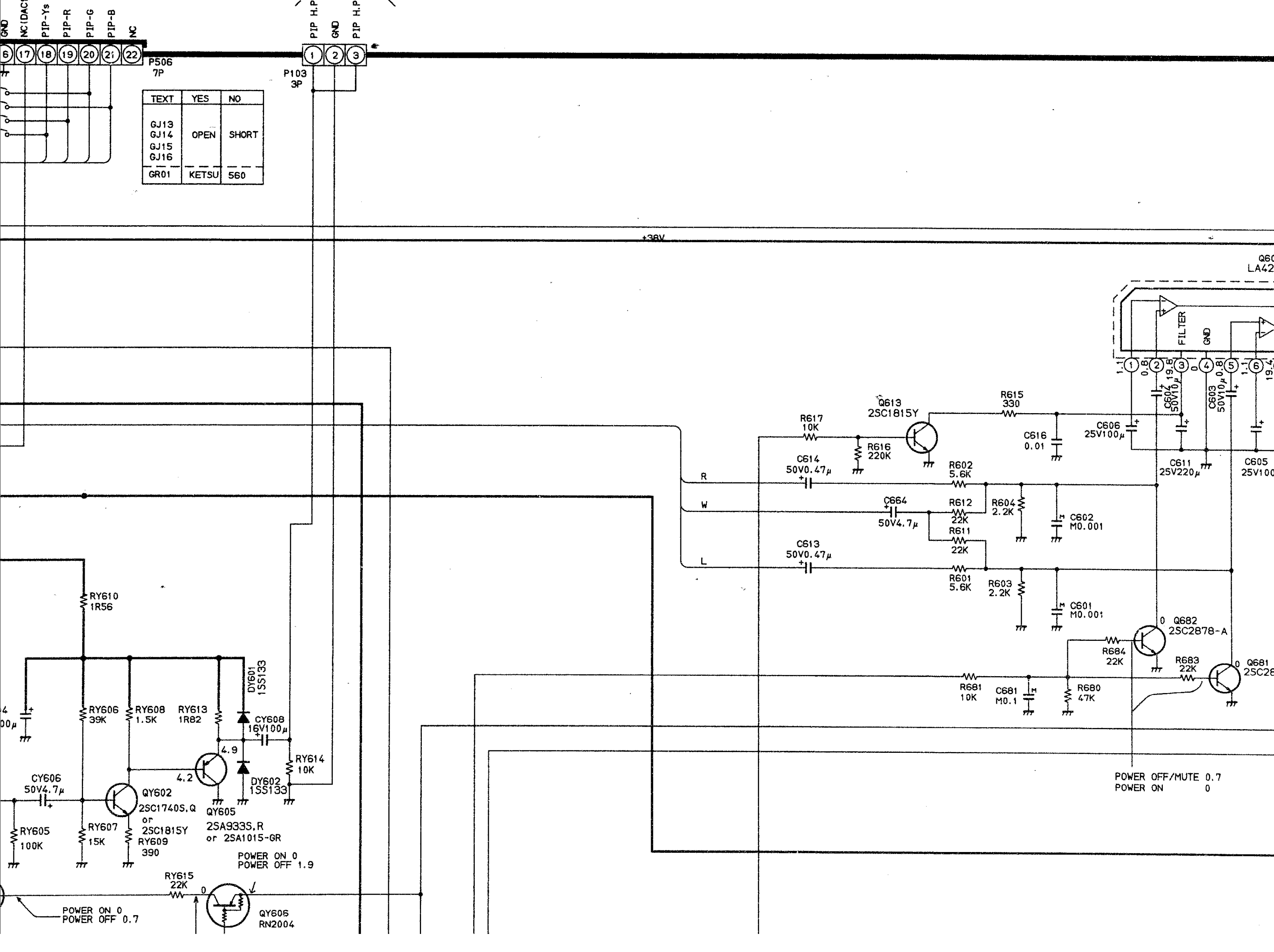
EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values
   sed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values m
   sed in μH, and the values less than 1 in H.

10 11 12 13

	43"	5
R603	2.7K	2.
R604	2.7K	2.
R611	8.2K	2
R612	8.2K	2

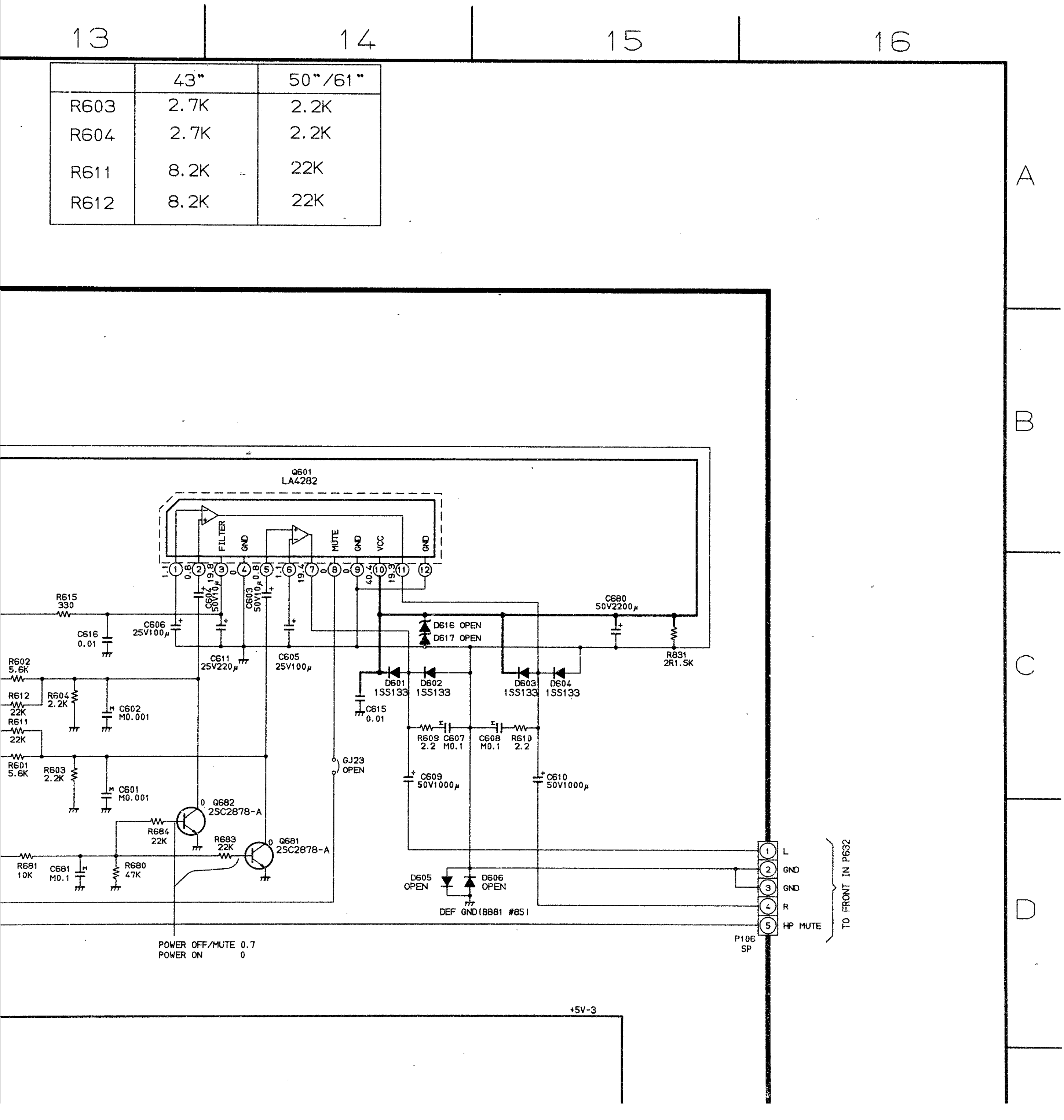


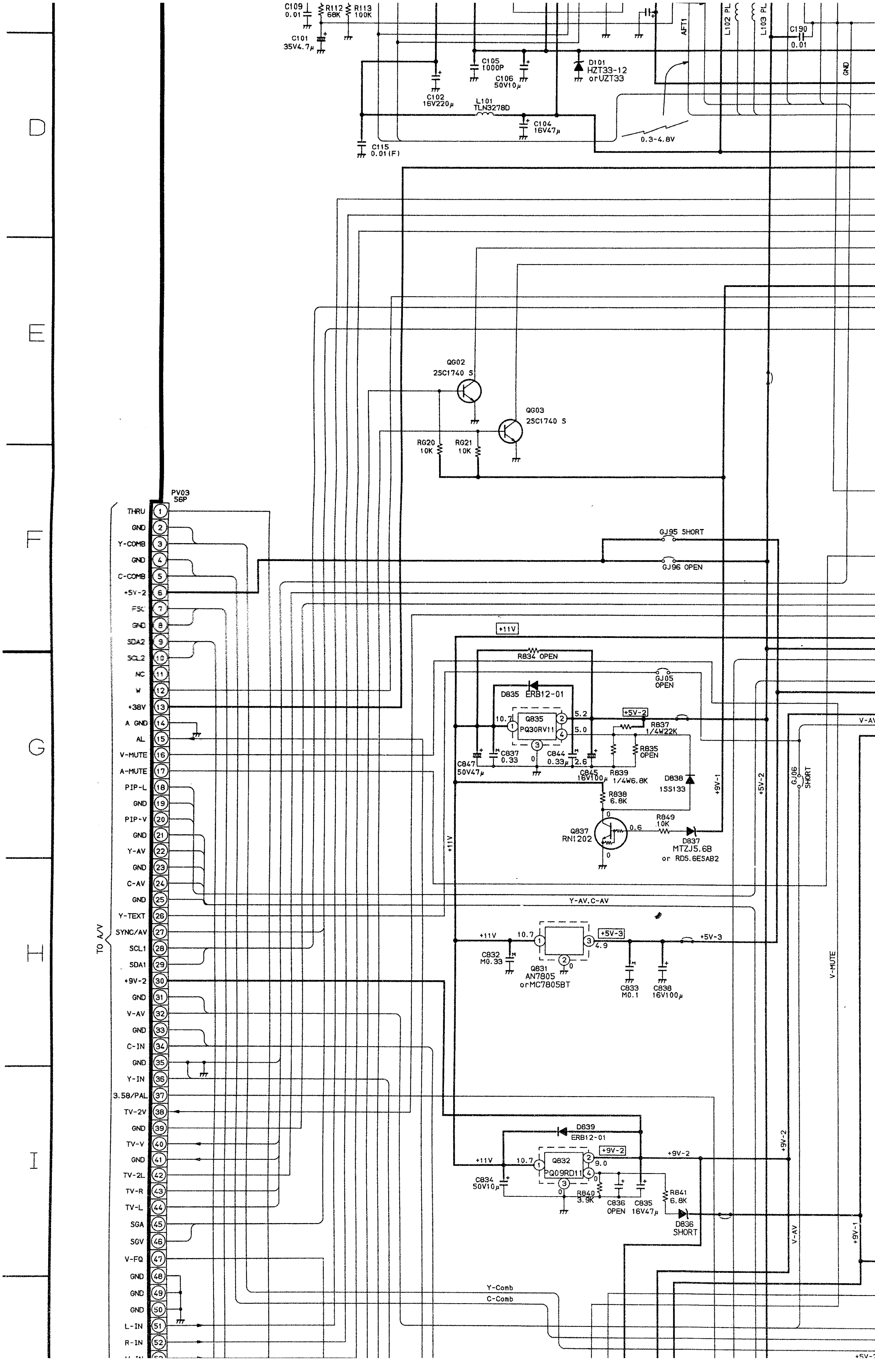
GND
NC(DAC1)
PIP-Ys
PIP-R
PIP-G
PIP-B
NC
P506
7P
TEXT
YES
NO
GJ13
GJ14
GJ15
GJ16
OPEN
SHORT
GR01
KETSU
560
TO FRONT IN. P633
PIP H.P.
GND
PIP H.P.
P103
3P
+38V
Q60
LA42
FILTER
GND
R615
330
Q613
2SC1815Y
R617
10K
R616
220K
C616
0.01
C606
25V100μ
C604
50V10μ
C603
50V10μ
C611
25V220μ
C605
25V100
C614
50V0.47μ
R
W
L
R602
5.6K
C664
50V4.7μ
R612
22K
R611
22K
R604
2.2K
C602
M0.001
C613
50V0.47μ
R601
5.6K
R603
2.2K
C601
M0.001
Q682
2SC2878-A
R684
22K
R683
22K
Q681
2SC28
R681
10K
C681
M0.1
R680
47K
POWER OFF/MUTE 0.7
POWER ON 0
RY610
1R56
RY606
39K
RY608
1.5K
RY613
1R82
DY601
1SS133
CY608
16V100μ
RY614
10K
DY602
1SS133
CY606
50V4.7μ
QY602
2SC1740S,Q
or
2SC1815Y
QY605
2SA933S,R
or 2SA1015-GR
RY605
100K
RY607
15K
RY609
390
POWER ON 0
POWER OFF 1.9
RY615
22K
QY606
RN2004
POWER ON 0
POWER OFF 0.7

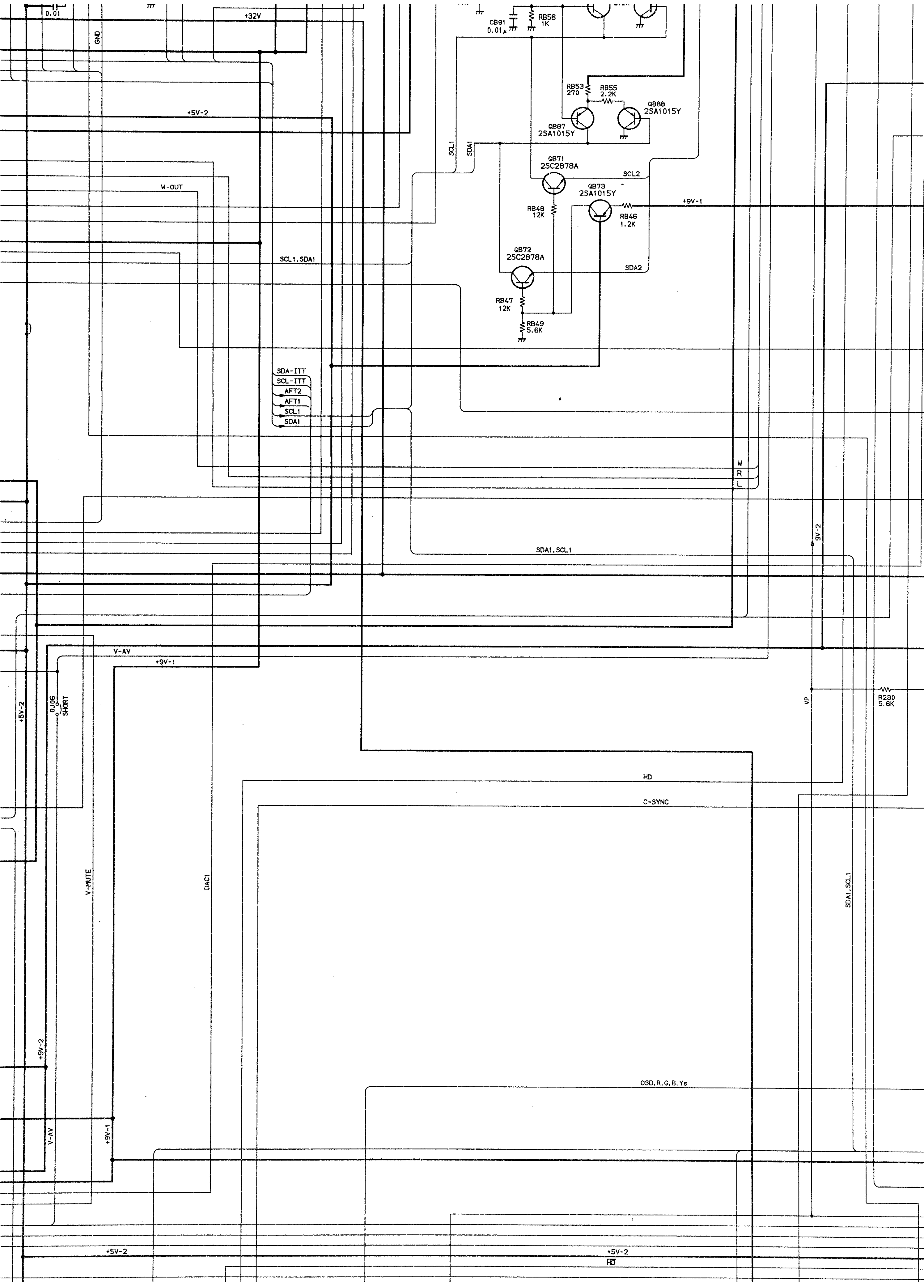
ACITOR and INDUCTOR

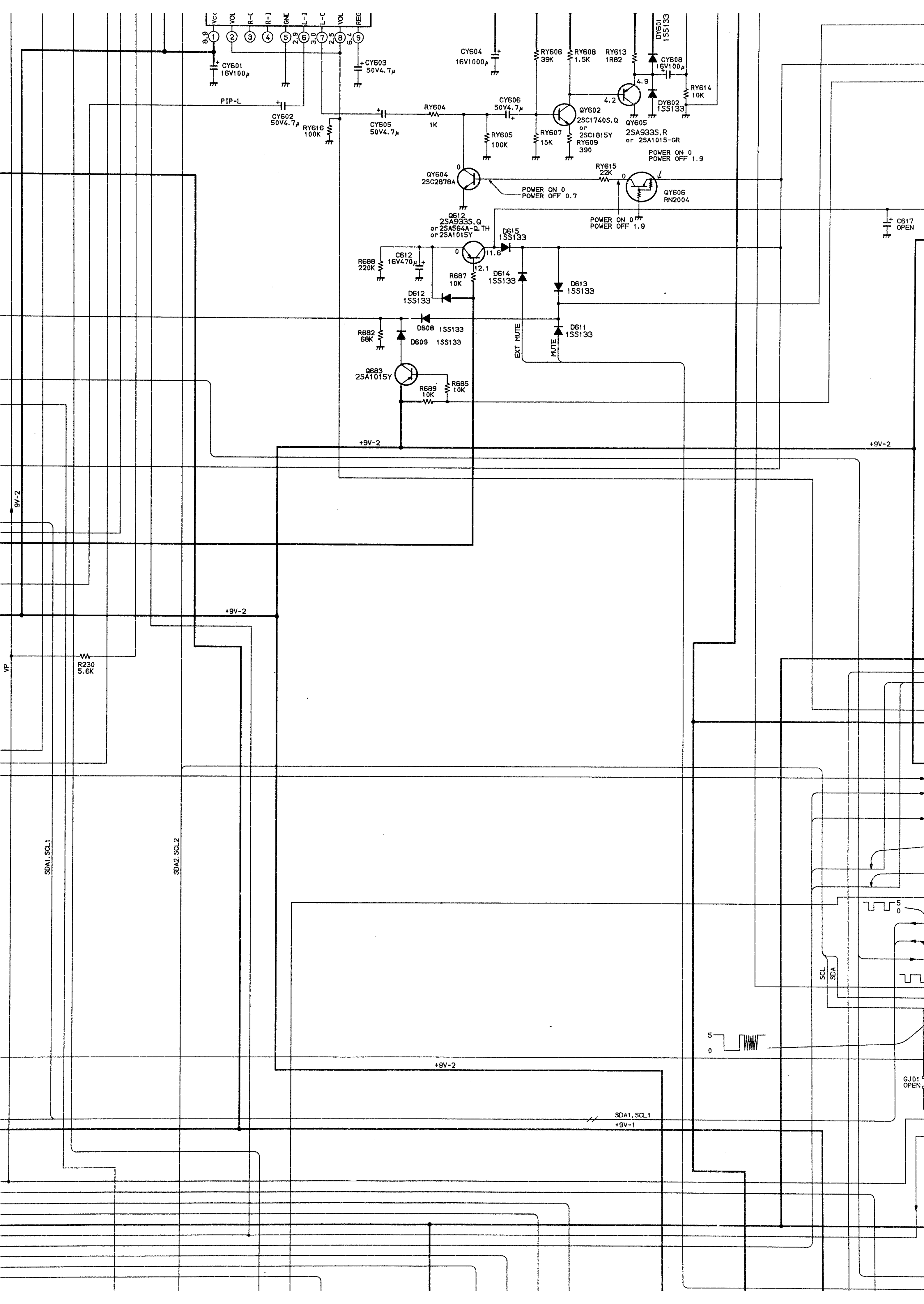
k=1,000, M=1,000,000
schematic, all capacitor values less than 1 are expres-
e than 1 in pF.
chematic, all inductor values more than 1 are expres-
s than 1 in H.

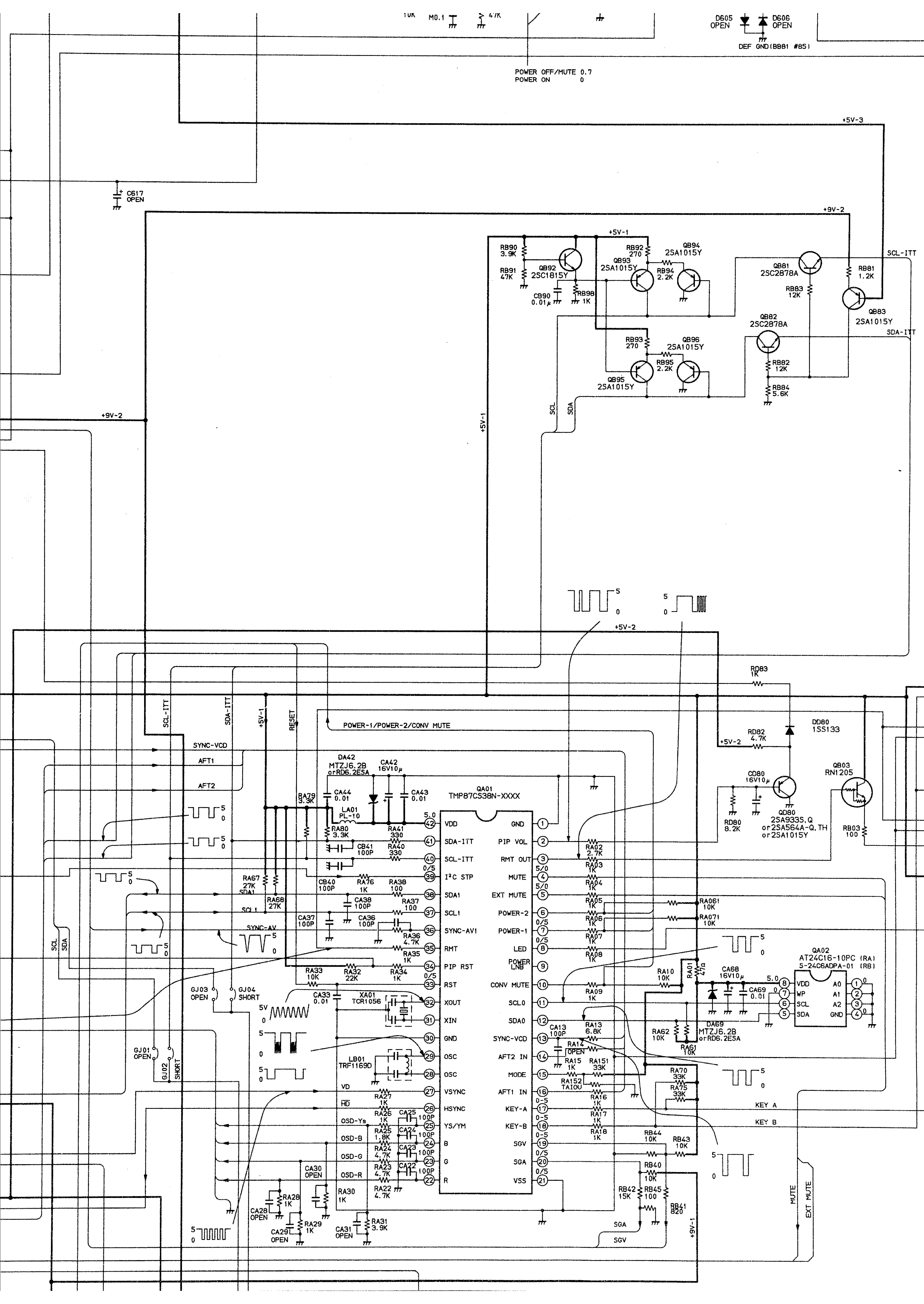
	43"	50"/61"
R603	2.7K	2.2K
R604	2.7K	2.2K
R611	8.2K	22K
R612	8.2K	22K

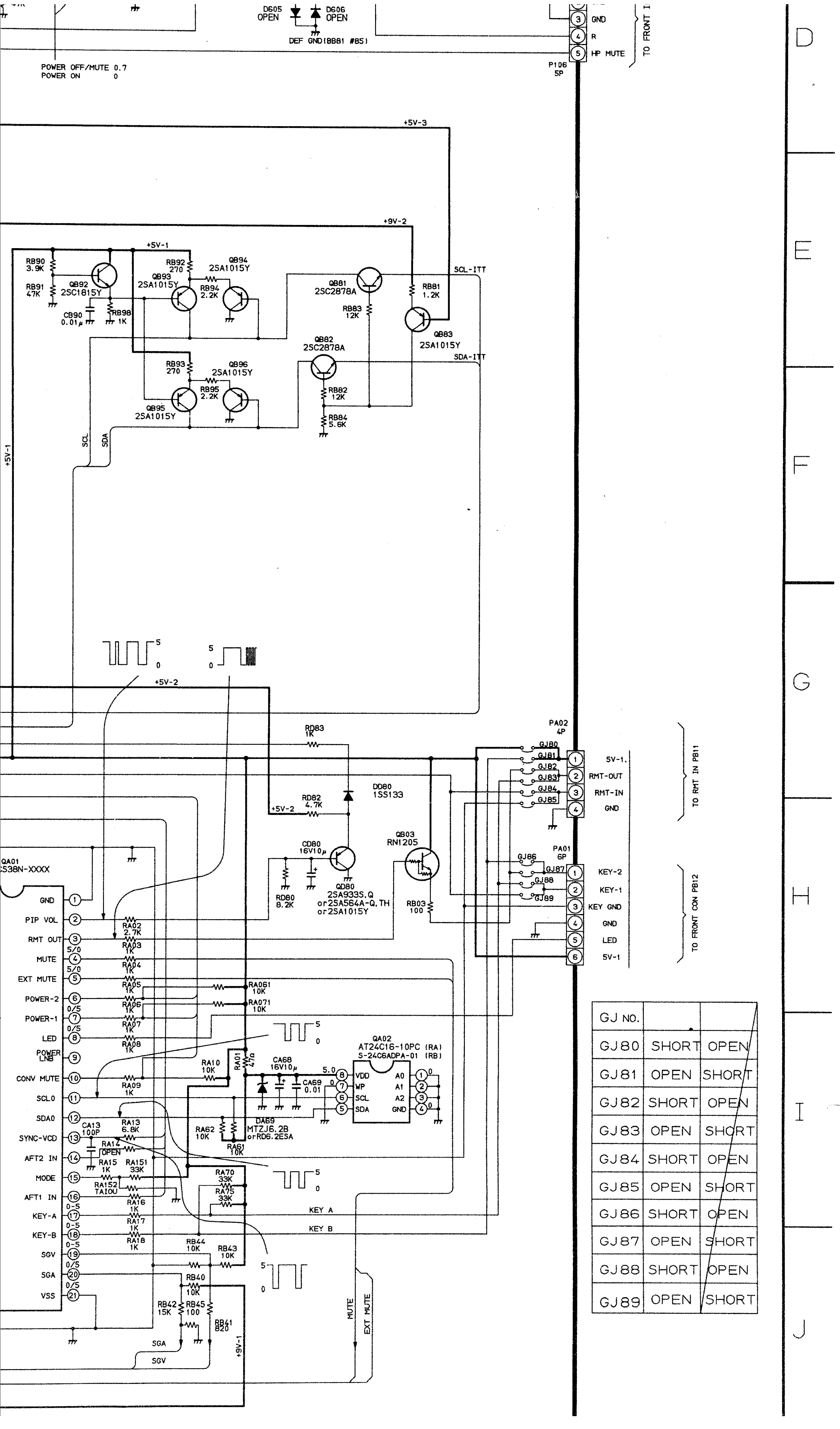

13
14
15
16
A
B
C
D
Q601
LA4282
FILTER
GND
MUTE
GND
VCC
GND
1.1
0.8
19.8
0
0.8
1.1
19.4
0
0
40.4
19.3
R615
330
C616
0.01
C606
25V100μ
C604
50V10μ
C603
50V10μ
C611
25V220μ
C605
25V100μ
R602
5.6K
R612
22K
R611
22K
R604
2.2K
C602
M0.001
R601
5.6K
R603
2.2K
C601
M0.001
Q682
2SC2878-A
R684
22K
R683
22K
Q681
2SC2878-A
R681
10K
C681
M0.1
R680
47K
GJ23
OPEN
POWER OFF/MUTE 0.7
POWER ON 0
C680
50V2200μ
D616 OPEN
D617 OPEN
R831
2R1.5K
D601
1SS133
D602
1SS133
D603
1SS133
D604
1SS133
C615
0.01
R609
2.2
C607
M0.1
C608
M0.1
R610
2.2
C609
50V1000μ
C610
50V1000μ
D605
OPEN
D606
OPEN
DEF GND(BB81 #851
L
GND
GND
R
HP MUTE
P106
5P
TO FRONT IN P632
+5V-3


D
E
F
G
H
I
C109
0.01
R112
68K
R113
100K
C101
35V4.7μ
C105
1000P
C106
50V10μ
C102
16V220μ
L101
TLN3278D
C104
16V47μ
D101
HZT33-12
orUZT33
C115
0.01(F)
AFT1
L102 PL
L103 PL
C190
0.01
GND
0.3~4.8V
QG02
2SC1740 S
QG03
2SC1740 S
RG20
10K
RG21
10K
PV03
56P
TO A/V
THRU ①
GND ②
Y-COMB ③
GND ④
C-COMB ⑤
+5V-2 ⑥
FSC ⑦
GND ⑧
SDA2 ⑨
SCL2 ⑩
NC ⑪
W ⑫
+38V ⑬
A GND ⑭
AL ⑮
V-MUTE ⑯
A-MUTE ⑰
PIP-L ⑱
GND ⑲
PIP-V ⑳
GND ㉑
Y-AV ㉒
GND ㉓
C-AV ㉔
GND ㉕
Y-TEXT ㉖
SYNC/AV ㉗
SCL1 ㉘
SDA1 ㉙
+9V-2 ㉚
GND ㉛
V-AV ㉜
GND ㉝
C-IN ㉞
GND ㉟
Y-IN ㊱
3.58/PAL ㊲
TV-2V ㊳
GND ㊴
TV-V ㊵
GND ㊶
TV-2L ㊷
TV-R ㊸
TV-L ㊹
SGA ㊺
SGV ㊻
V-FQ ㊼
GND ㊽
GND ㊾
GND ㊿
L-IN (51)
R-IN (52)
GJ95 SHORT
GJ96 OPEN
+11V
R834 OPEN
GJ05
OPEN
D835 ERB12-01
Q835
PQ30RV11
10.7
5.2
5.0
0
2.6
+5V-2
R837
1/4W22K
R835
OPEN
C847
50V47μ
C837
0.33
C844
0.33μ
C845
16V100μ
R839
1/4W6.8K
D838
1SS133
R838
6.8K
Q837
RN1202
0.6
R849
10K
D837
MTZJ5.6B
or RD5.6ESAB2
+9V-1
+5V-2
GJ06
SHORT
V-AV
Y-AV,C-AV
+11V
10.7
+5V-3
4.9
+5V-3
C832
M0.33
Q831
AN7805
orMC7805BT
C833
M0.1
C838
16V100μ
V-MUTE
D839
ERB12-01
+9V-2
Q832
PQ09RD11
9.0
+9V-2
C834
50V10μ
R840
3.9K
C836
OPEN
C835
16V47μ
R841
6.8K
D836
SHORT
+9V-2
V-AV
+9V-1
Y-Comb
C-Comb
+5V-

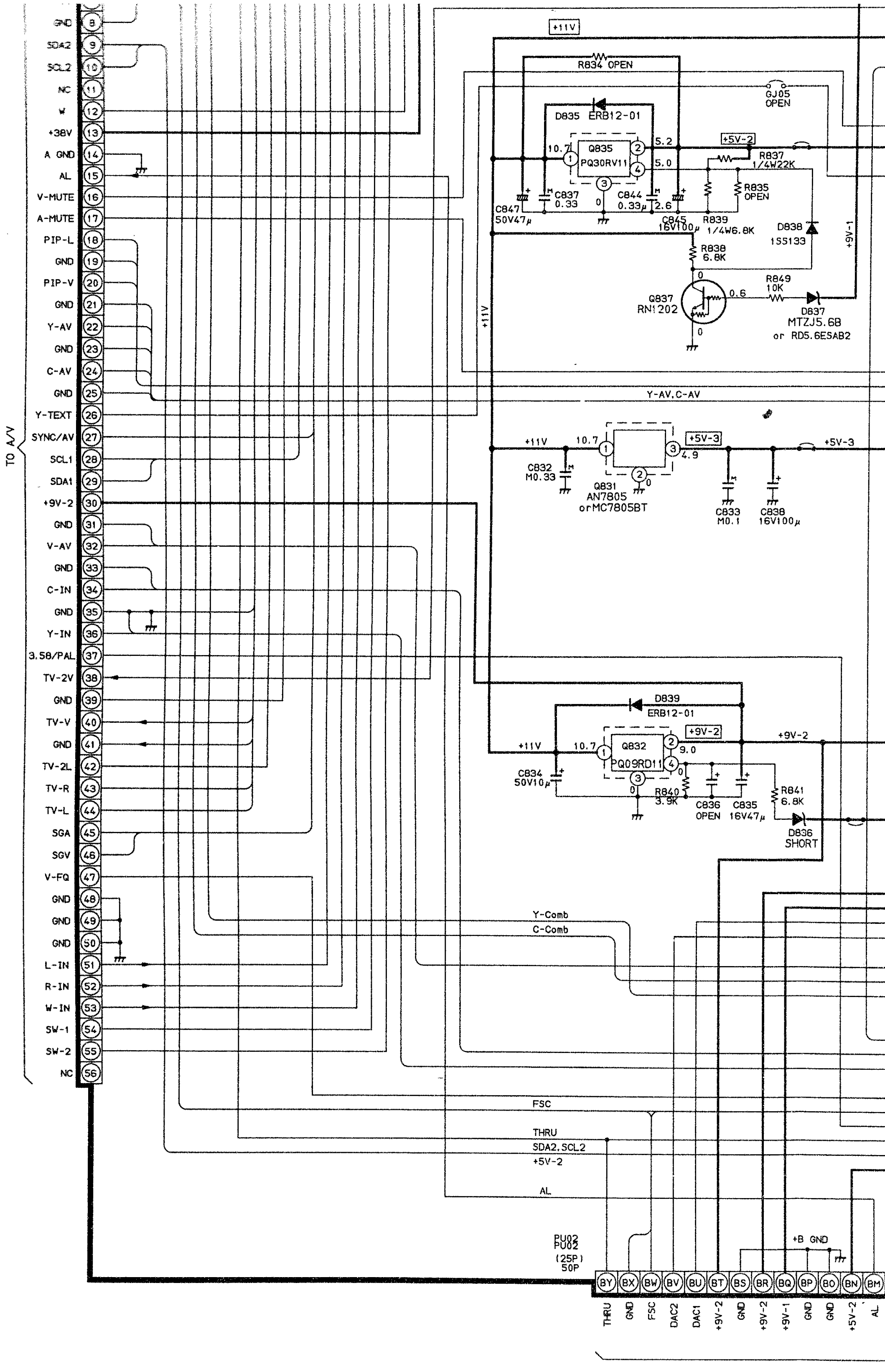

0.01
+32V
GND
CB91
0.01μ
RB56
1K
RB53
270
RB55
2.2K
QB88
2SA1015Y
QB87
2SA1015Y
+5V-2
SCL1
SDA1
QB71
2SC2878A
SCL2
W-OUT
QB73
2SA1015Y
+9V-1
RB48
12K
RB46
1.2K
SCL1.SDA1
QB72
2SC2878A
SDA2
RB47
12K
RB49
5.6K
SDA-ITT
SCL-ITT
AFT2
AFT1
SCL1
SDA1
W
R
L
9V-2
SDA1.SCL1
V-AV
+9V-1
+5V-2
GJ06
SHORT
VP
R230
5.6K
HD
C-SYNC
V-MUTE
DAC1
SDA1.SCL1
+9V-2
OSD.R.G.B.Ys
V-AV
+9V-1
+5V-2
+5V-2
HD


Vcc
VOL
R-O
R-I
GND
L-I
L-O
VOL
REG
8.9
2.9
3.0
2.5
6.4
CY601
16V100μ
CY603
50V4.7μ
CY604
16V1000μ
RY606
39K
RY608
1.5K
RY613
1R82
DY601
1SS133
CY608
16V100μ
4.9
RY614
10K
4.2
DY602
1SS133
PIP-L
CY602
50V4.7μ
RY616
100K
CY605
50V4.7μ
RY604
1K
CY606
50V4.7μ
QY602
2SC1740S,Q
or
2SC1815Y
QY605
2SA933S,R
or 2SA1015-GR
RY605
100K
RY607
15K
RY609
390
POWER ON 0
POWER OFF 1.9
RY615
22K
0
QY604
2SC2878A
POWER ON 0
POWER OFF 0.7
QY606
RN2004
POWER ON 0
POWER OFF 1.9
C617
OPEN
Q612
2SA933S,Q
or 2SA564A-Q,TH
or 2SA1015Y
D615
1SS133
11.6
12.1
R688
220K
C612
16V470μ
R687
10K
D614
1SS133
D613
1SS133
D612
1SS133
D608
1SS133
R682
68K
D609
1SS133
D611
1SS133
EXT MUTE
MUTE
Q683
2SA1015Y
R689
10K
R685
10K
+9V-2
+9V-2
9V-2
+9V-2
VP
R230
5.6K
SDA1,SCL1
SDA2,SCL2
5
0
SCL
SDA
5
0
+9V-2
GJ01
OPEN
SDA1,SCL1
+9V-1
+9V-2

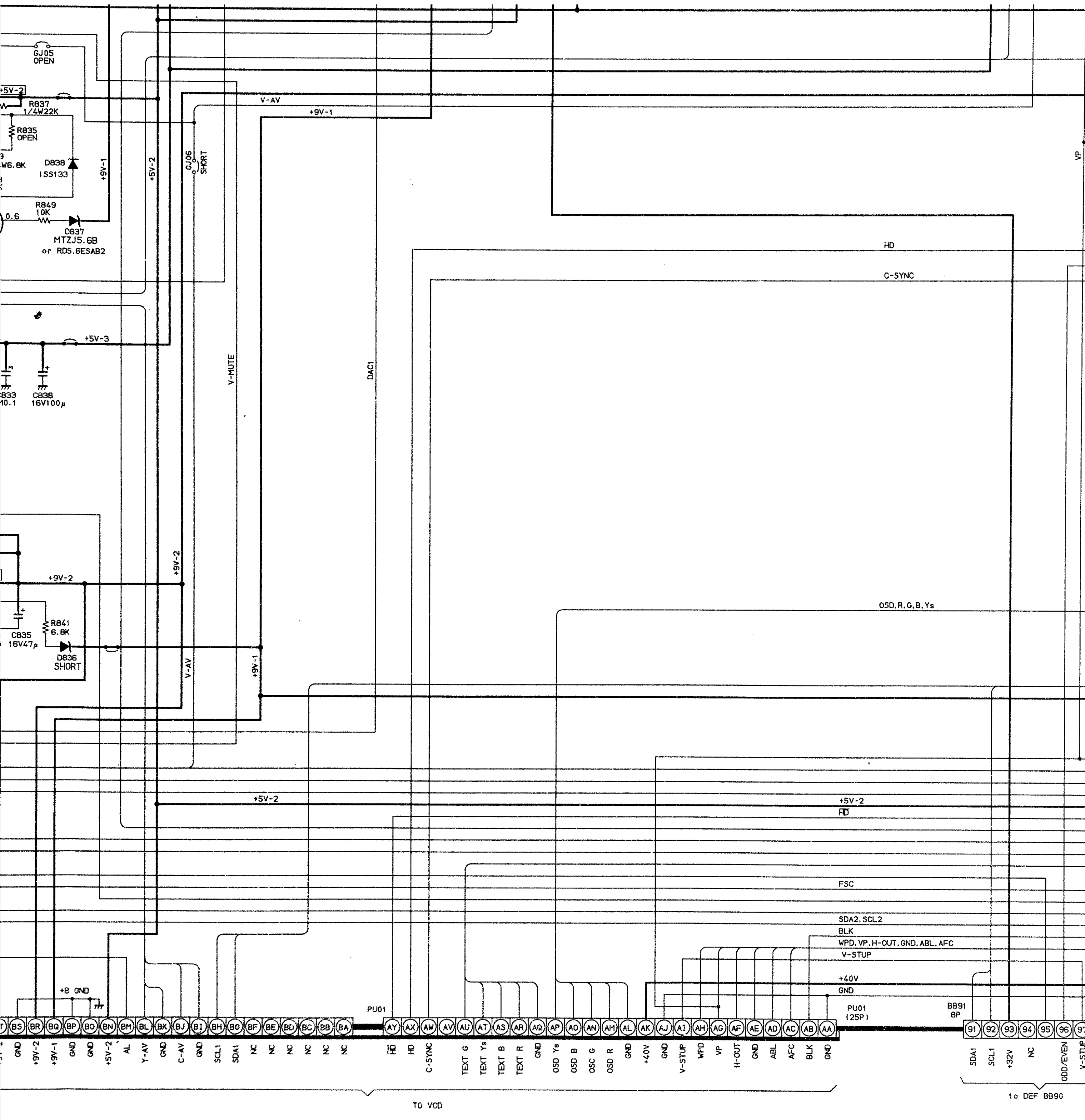

10K
M0.1
47K
D605 OPEN
D606 OPEN
DEF GND (BBB1 #85)
POWER OFF/MUTE 0.7
POWER ON 0
+5V-3
C617 OPEN
+9V-2
+5V-1
RB90 3.9K
RB91 47K
QB92 2SC1815Y
CB90 0.01µ
RB98 1K
RB92 270
QB93 2SA1015Y
QB94 2SA1015Y
RB94 2.2K
QB81 2SC2878A
RB83 12K
RB81 1.2K
QB83 2SA1015Y
SCL-ITT
QB82 2SC2878A
SDA-ITT
RB93 270
QB96 2SA1015Y
RB95 2.2K
QB95 2SA1015Y
RB82 12K
RB84 5.6K
SCL
SDA
+9V-2
+5V-1
+5V-2
RD83 1K
DD80 1SS133
RD82 4.7K
+5V-2
CD80 16V10µ
QD80 2SA933S,Q or 2SA564A-Q,TH or 2SA1015Y
RD80 8.2K
QB03 RN1205
RB03 100
SCL-ITT
SDA-ITT
+5V-1
RESET
POWER-1/POWER-2/CONV MUTE
SYNC-VCD
AFT1
AFT2
DA42 MTZJ6.2B or RD6.2ESA
CA42 16V10µ
CA44 0.01
CA43 0.01
RA79 3.3K
LA01 PL-10
QA01 TMP87CS38N-XXXX
5.0
42 VDD
41 SDA-ITT
40 SCL-ITT
39 I²C STP
38 SDA1
37 SCL1
36 SYNC-AV1
35 RMT
34 PIP RST
33 RST
32 XOUT
31 XIN
30 GND
29 OSC
28 OSC
27 VSYNC
26 HSYNC
25 YS/YM
24 B
23 G
22 R
1 GND
2 PIP VOL
3 RMT OUT
4 MUTE
5 EXT MUTE
6 POWER-2
7 POWER-1
8 LED
9 POWER LNB
10 CONV MUTE
11 SCL0
12 SDA0
13 SYNC-VCD
14 AFT2 IN
15 MODE
16 AFT1 IN
17 KEY-A
18 KEY-B
19 SGV
20 SGA
21 VSS
RA80 3.3K
RA41 330
CB41 100P
RA40 330
CB40 100P
RA76 1K
RA38 100
CA38 100P
RA37 100
CA37 100P
CA36 100P
RA36 4.7K
RA35 1K
RA34 1K
RA33 10K
RA32 22K
RA67 27K
RA68 27K
SDA1
SCL1
SYNC-AV
CA33 0.01
XA01 TCR1056
LB01 TRF1169D
VD
HD
OSD-Ys
OSD-B
OSD-G
OSD-R
RA27 1K
RA26 1K
CA25 100P
RA25 1.8K
CA24 100P
RA24 4.7K
CA23 100P
RA23 4.7K
CA22 100P
RA22 4.7K
CA30 OPEN
RA30 1K
RA28 1K
CA28 OPEN
RA29 1K
CA29 OPEN
CA31 OPEN
RA31 3.9K
GJ03 OPEN
GJ04 SHORT
GJ01 OPEN
GJ02 SHORT
5V
0
5
RA02 2.7K
RA03 1K
RA04 1K
RA05 1K
RA06 1K
RA07 1K
RA08 1K
RA09 1K
RA061 10K
RA071 10K
RA10 10K
RA01 47Ω
CA68 16V10µ
CA69 0.01
DA69 MTZJ6.2B or RD6.2ESA
RA62 10K
RA61 10K
QA02 AT24C16-10PC (RA) S-24C6ADPA-01 (RB)
8 VDD
7 WP
6 SCL
5 SDA
1 A0
2 A1
3 A2
4 GND
CA13 100P
RA13 6.8K
RA14 OPEN
RA15 1K
RA151 33K
RA152 TAIOU
RA16 1K
RA17 1K
RA18 1K
RA70 33K
RA75 33K
KEY A
KEY B
RB44 10K
RB43 10K
RB40 10K
RB42 15K
RB45 100
RB41 820
SGA
SGV
+9V-1
MUTE
EXT MUTE
0/5
5/0
0-5


D605 OPEN
D606 OPEN
DEF GND(BB81 #85)
③ GND
④ R
⑤ HP MUTE
P106 5P
TO FRONT I
POWER OFF/MUTE 0.7
POWER ON 0
+5V-3
+9V-2
+5V-1
RB90 3.9K
RB91 47K
QB92 2SC1815Y
CB90 0.01μ
RB98 1K
RB92 270
QB93 2SA1015Y
QB94 2SA1015Y
RB94 2.2K
QB81 2SC2878A
RB83 12K
RB81 1.2K
QB83 2SA1015Y
SCL-ITT
SDA-ITT
QB82 2SC2878A
RB82 12K
RB84 5.6K
RB93 270
QB96 2SA1015Y
RB95 2.2K
QB95 2SA1015Y
SCL
SDA
+5V-1
5
0
+5V-2
RD83 1K
DD80 1SS133
RD82 4.7K
+5V-2
CD80 16V10μ
QD80 2SA933S.Q or2SA564A-Q.TH or2SA1015Y
RD80 8.2K
QB03 RN1205
RB03 100
PA02 4P
GJ80
GJ81
GJ82
GJ83
GJ84
GJ85
① 5V-1
② RMT-OUT
③ RMT-IN
④ GND
TO RMT IN PB11
PA01 6P
GJ86
GJ87
GJ88
GJ89
① KEY-2
② KEY-1
③ KEY GND
④ GND
⑤ LED
⑥ 5V-1
TO FRONT CON PB12
QA01
S38N-XXXX
GND ①
PIP VOL ②
RMT OUT ③
MUTE ④
EXT MUTE ⑤
POWER-2 ⑥
POWER-1 ⑦
LED ⑧
POWER LNB ⑨
CONV MUTE ⑩
SCLO ⑪
SDAO ⑫
SYNC-VCD ⑬
AFT2 IN ⑭
MODE ⑮
AFT1 IN ⑯
KEY-A ⑰
KEY-B ⑱
SGV ⑲
SGA ⑳
VSS ㉑
5/0
0/5
0-5
RA02 2.7K
RA03 1K
RA04 1K
RA05 1K
RA06 1K
RA07 1K
RA08 1K
RA09 1K
RA061 10K
RA071 10K
RA10 10K
RA01 47Ω
CA68 16V10μ
CA69 0.01
5.0
0
QA02 AT24C16-10PC (RA) S-24C6ADPA-01 (RB)
⑧ VDD
⑦ WP
⑥ SCL
⑤ SDA
A0 ①
A1 ②
A2 ③
GND ④
DA69 MTZJ6.2B orRD6.2ESA
RA62 10K
RA61 10K
CA13 100P
RA13 6.8K
RA14 OPEN
RA15 1K
RA151 33K
RA152 TAIOU
RA16 1K
RA17 1K
RA18 1K
RA70 33K
RA75 33K
KEY A
KEY B
RB44 10K
RB43 10K
RB40 10K
RB42 15K
RB45 100
RB41 820
SGA
SGV
+9V-1
MUTE
EXT MUTE
D
E
F
G
H
I
J

GJ NO.		
GJ80	SHORT	OPEN
GJ81	OPEN	SHORT
GJ82	SHORT	OPEN
GJ83	OPEN	SHORT
GJ84	SHORT	OPEN
GJ85	OPEN	SHORT
GJ86	SHORT	OPEN
GJ87	OPEN	SHORT
GJ88	SHORT	OPEN
GJ89	OPEN	SHORT

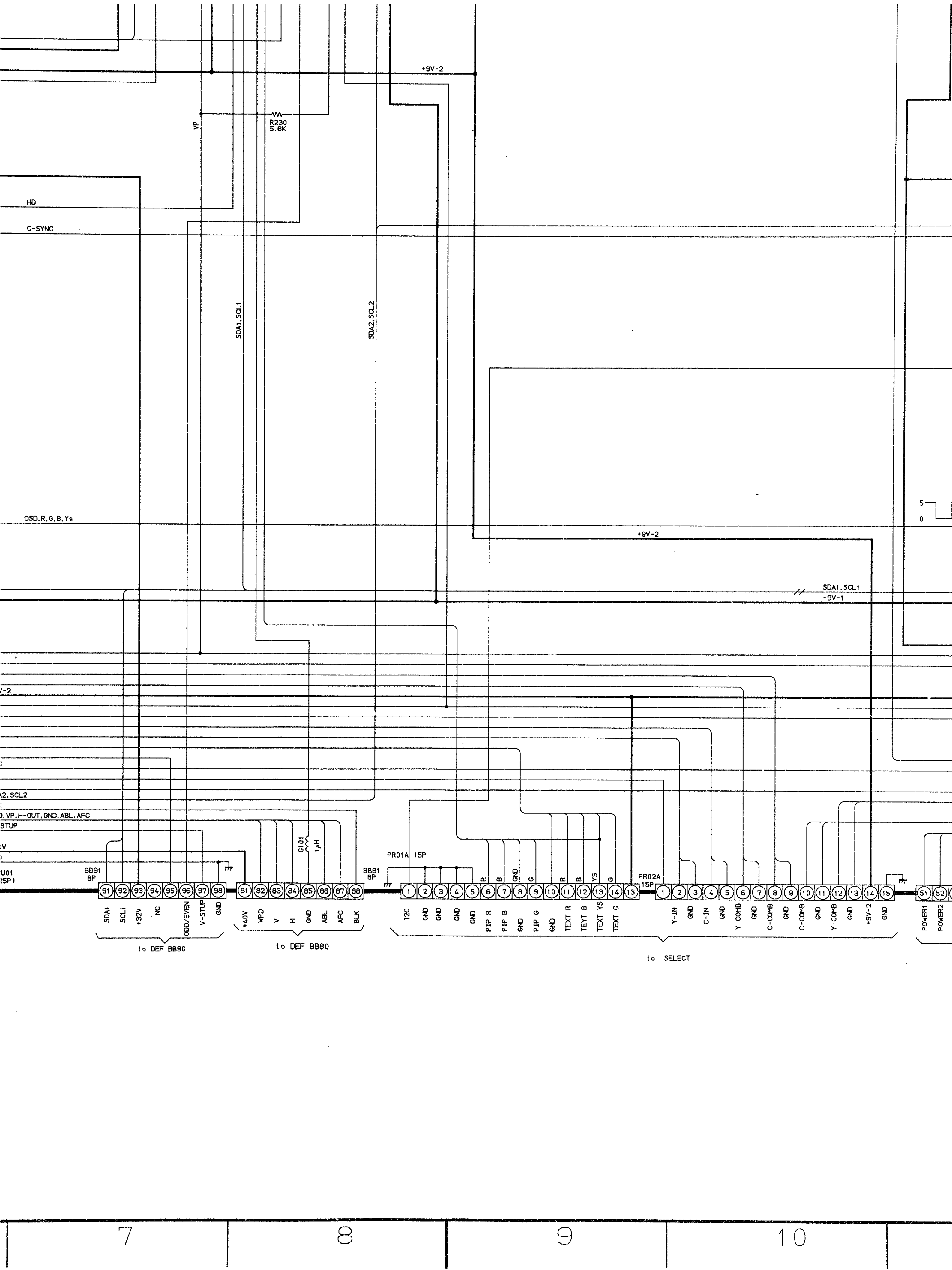

GND 8
SDA2 9
SCL2 10
NC 11
W 12
+38V 13
A GND 14
AL 15
V-MUTE 16
A-MUTE 17
PIP-L 18
GND 19
PIP-V 20
GND 21
Y-AV 22
GND 23
C-AV 24
GND 25
Y-TEXT 26
SYNC/AV 27
SCL1 28
SDA1 29
+9V-2 30
GND 31
V-AV 32
GND 33
C-IN 34
GND 35
Y-IN 36
3.58/PAL 37
TV-2V 38
GND 39
TV-V 40
GND 41
TV-2L 42
TV-R 43
TV-L 44
SGA 45
SGV 46
V-FQ 47
GND 48
GND 49
GND 50
L-IN 51
R-IN 52
W-IN 53
SW-1 54
SW-2 55
NC 56
TO A/V
+11V
R834 OPEN
GJ05 OPEN
D835 ERB12-01
Q835 PQ30RV11
10.7
5.2
5.0
+5V-2
R837 1/4W22K
R835 OPEN
C847 50V47µ
C837 0.33
C844 0.33µ
2.6
C845 16V100µ
R839 1/4W6.8K
D838 1SS133
+9V-1
R838 6.8K
R849 10K
0.6
Q837 RN1202
D837 MTZJ5.6B or RD5.6ESAB2
Y-AV,C-AV
+11V
Q831 AN7805 or MC7805BT
C832 M0.33
+5V-3
4.9
C833 M0.1
C838 16V100µ
D839 ERB12-01
Q832 PQ09RD11
+9V-2
9.0
C834 50V10µ
R840 3.9K
C836 OPEN
C835 16V47µ
R841 6.8K
D836 SHORT
Y-Comb
C-Comb
FSC
THRU
SDA2,SCL2
+5V-2
AL
PU02 PU02 (25P) 50P
+B GND
BY THRU
BX GND
BW FSC
BV DAC2
BU DAC1
BT +9V-2
BS GND
BR +9V-2
BQ +9V-1
BP GND
BO GND
BN +5V-2
BM AL

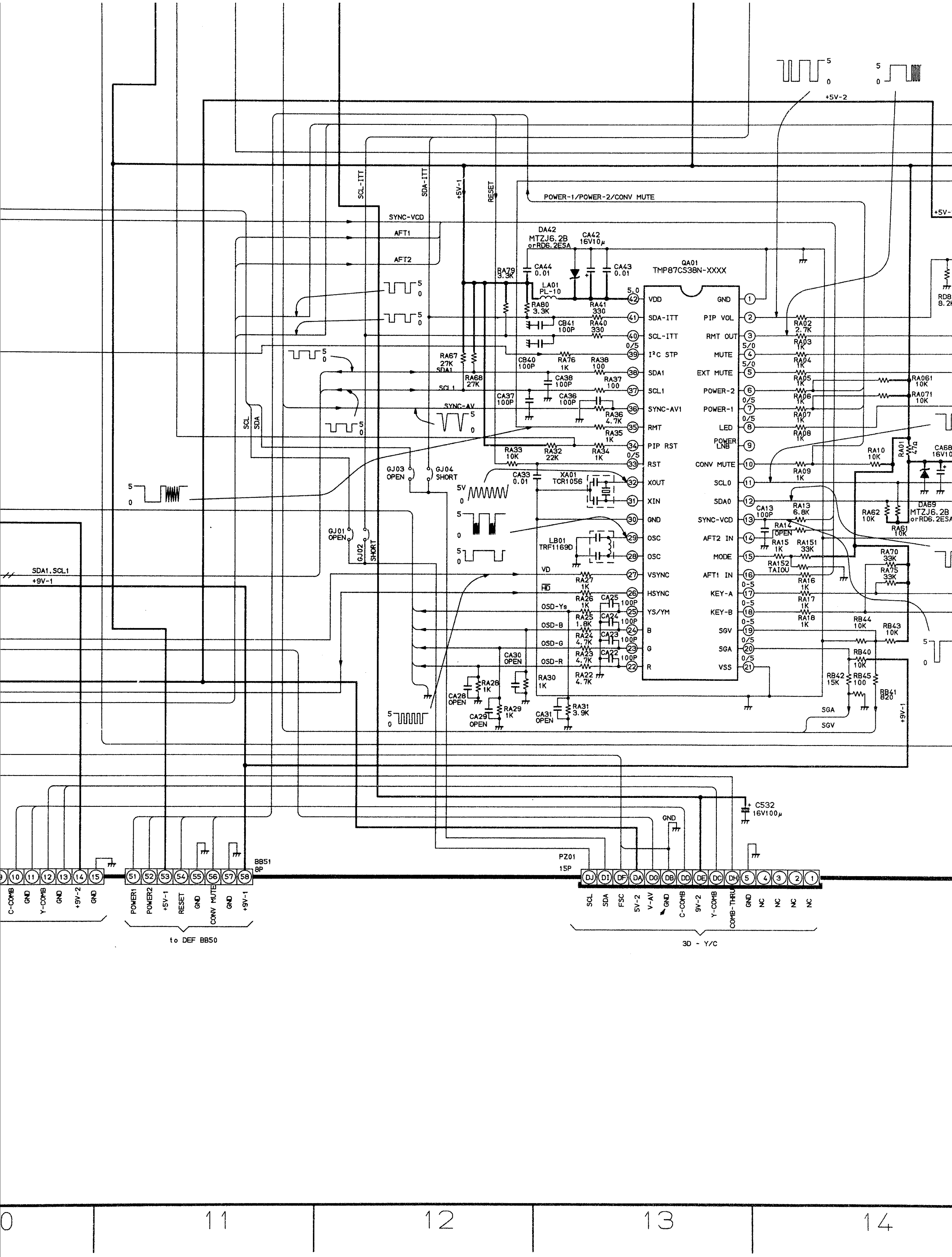
43N9UXC	43N9UXE 43N9UXA 43N9UXM	50N9UXE 50N9UXA 50N9UXM	50N9UXR	43N9UXH 43N9UXK
PB9048F	PB9051	PB9048	PB9050	PB9052

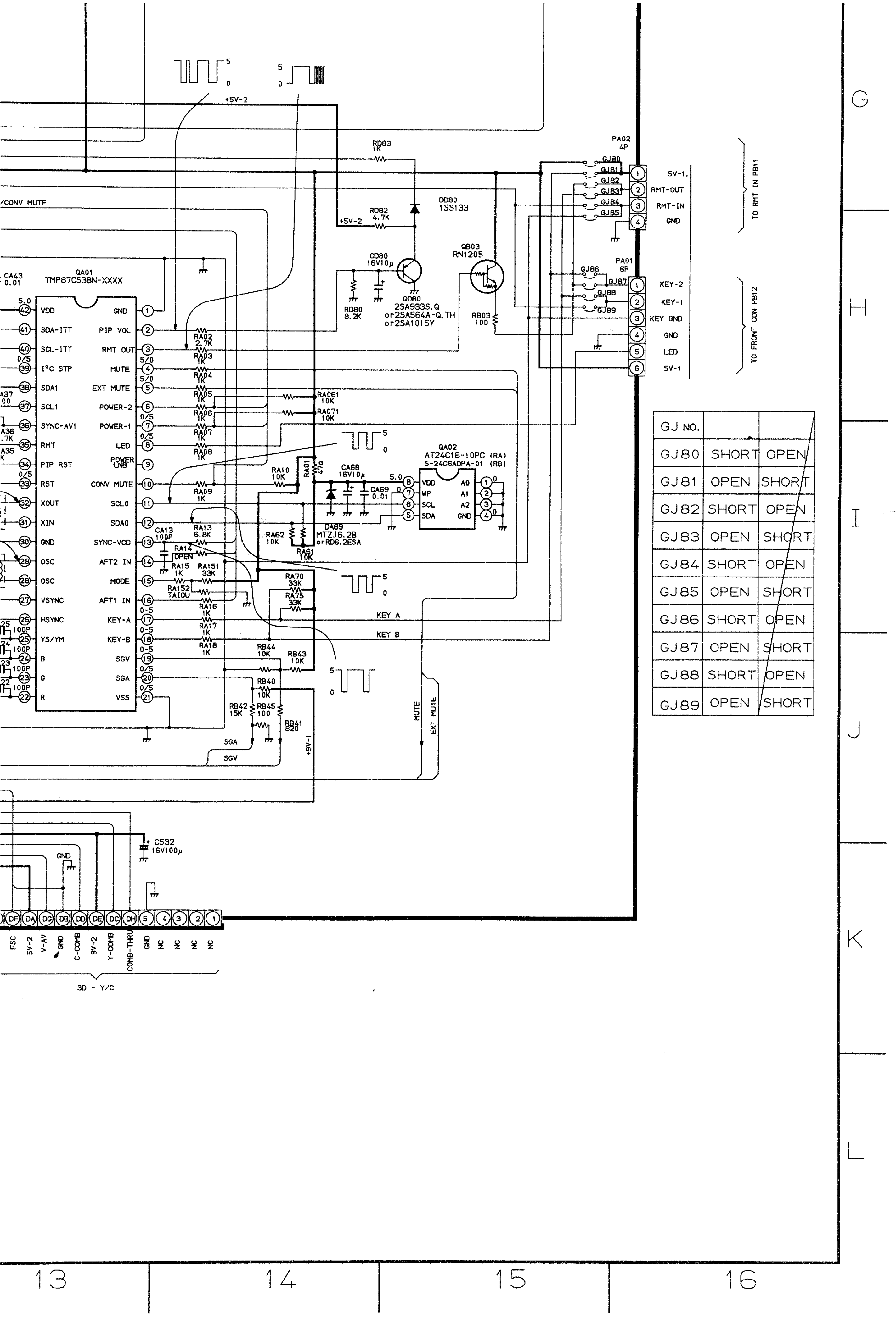

GJ05
OPEN
+5V-2
R837
1/4W22K
R835
OPEN
W6.8K
D838
1SS133
+9V-1
+5V-2
GJ06
SHORT
R849
10K
0.6
D837
MTZJ5.6B
or RD5.6ESAB2
V-AV
+9V-1
VP
HD
C-SYNC
+5V-3
C833
10.1
C838
16V100μ
V-MUTE
DAC1
+9V-2
+9V-2
C835
16V47μ
R841
6.8K
D836
SHORT
V-AV
+9V-1
OSD.R.G.B.Ys
+5V-2
+5V-2
HD
FSC
SDA2.SCL2
BLK
WPD.VP.H-OUT.GND.ABL.AFC
V-STUP
+40V
GND
+B GND
PU01
PU01
(25P)
BB91
8P
BS
BR
BQ
BP
BO
BN
BM
BL
BK
BJ
BI
BH
BG
BF
BE
BD
BC
BB
BA
AY
AX
AW
AV
AU
AT
AS
AR
AQ
AP
AO
AN
AM
AL
AK
AJ
AI
AH
AG
AF
AE
AD
AC
AB
AA
GND
+9V-2
+9V-1
GND
GND
+5V-2
AL
Y-AV
GND
C-AV
GND
SCL1
SDA1
NC
NC
NC
NC
NC
NC
HD
HD
C-SYNC
TEXT G
TEXT Ys
TEXT B
TEXT R
GND
OSD Ys
OSD B
OSC G
OSD R
GND
+40V
GND
V-STUP
WPD
VP
H-OUT
GND
ABL
AFC
BLK
GND
TO VCD
91
92
93
94
95
96
SDA1
SCL1
+32V
NC
ODD/EVEN
V-STUP
to DEF BB90

	43N9UXH 43N9UXK	50N9UXH	50N9UXC	43N9UXR	61N9UXC
	PB9052	PB9049	PB9048D	PB9053	PB9048G

4 5 6 7


+9V-2
VP
R230
5.6K
HD
C-SYNC
SDA1,SCL1
SDA2,SCL2
OSD,R,G,B,Ys
5
0
+9V-2
SDA1,SCL1
+9V-1
V-2
A2,SCL2
D,VP,H-OUT,GND,ABL,AFC
STUP
V
U01
25P)
BB91
8P
91
92
93
94
95
96
97
98
SDA1
SCL1
+32V
NC
ODD/EVEN
V-STUP
GND
to DEF BB90
G101
1µH
81
82
83
84
85
86
87
88
+40V
WPD
V
H
GND
ABL
AFC
BLK
to DEF BB80
BB81
8P
PR01A 15P
R
B
GND
G
R
B
YS
G
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
I2C
GND
GND
GND
GND
PIP R
PIP B
GND
PIP G
GND
TEXT R
TEYT B
TEXT YS
TEXT G
PR02A
15P
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
Y-IN
GND
C-IN
GND
Y-COMB
GND
C-COMB
GND
C-COMB
GND
Y-COMB
GND
+9V-2
GND
to SELECT
51
52
POWER1
POWER2
7
8
9
10


QA01
TMP87CS38N-XXXX
VDD
SDA-ITT
SCL-ITT
I²C STP
SDA1
SCL1
SYNC-AV1
RMT
PIP RST
RST
XOUT
XIN
GND
OSC
VSYNC
HSYNC
YS/YM
B
G
R
PIP VOL
RMT OUT
MUTE
EXT MUTE
POWER-2
POWER-1
LED
POWER LNB
CONV MUTE
SCL0
SDA0
SYNC-VCD
AFT2 IN
MODE
AFT1 IN
KEY-A
KEY-B
SGV
SGA
VSS
POWER-1/POWER-2/CONV MUTE
SYNC-VCD
AFT1
AFT2
SCL-ITT
SDA-ITT
+5V-1
RESET
+5V-2
DA42
MTZJ6.2B
orRD6.2ESA
CA42
16V10μ
CA44
0.01
CA43
0.01
RA79
3.3K
LA01
PL-10
RA80
3.3K
RA41
330
RA40
330
CB41
100P
CB40
100P
RA76
1K
RA38
100
RA67
27K
RA68
27K
CA38
100P
RA37
100
CA37
100P
CA36
100P
RA36
4.7K
RA35
1K
RA33
10K
RA32
22K
RA34
1K
SDA1
SCL1
SYNC-AV
SCL
SDA
GJ03
OPEN
GJ04
SHORT
GJ01
OPEN
GJ02
SHORT
CA33
0.01
XA01
TCR1056
LB01
TRF1169D
5V
VD
HD
OSD-Ys
OSD-B
OSD-G
OSD-R
RA27
1K
RA26
1K
RA25
1.8K
RA24
4.7K
RA23
4.7K
RA22
4.7K
CA25
100P
CA24
100P
CA23
100P
CA22
100P
CA30
OPEN
RA30
1K
RA28
1K
CA28
OPEN
CA29
OPEN
RA29
1K
CA31
OPEN
RA31
3.9K
RA02
2.7K
RA03
1K
RA04
1K
RA05
1K
RA06
1K
RA07
1K
RA08
1K
RA09
1K
RA061
10K
RA071
10K
RA10
10K
RA01
47Ω
CA68
16V10
DA69
MTZJ6.2B
orRD6.2ESA
RA62
10K
RA61
10K
CA13
100P
RA13
6.8K
RA14
OPEN
RA15
1K
RA151
33K
RA152
TAIOU
RA16
1K
RA17
1K
RA18
1K
RA70
33K
RA75
33K
RB44
10K
RB43
10K
RB40
10K
RB42
15K
RB45
100
RB41
820
SGA
SGV
+9V-1
RD8
8.2K
5.0
0/5
5/0
0-5
SDA1, SCL1
+9V-1
C532
16V100μ
GND
BB51
8P
PZ01
15P
C-COMB
GND
Y-COMB
GND
+9V-2
GND
POWER1
POWER2
+5V-1
RESET
GND
CONV MUTE
GND
+9V-1
to DEF BB50
SCL
SDA
FSC
5V-2
V-AV
GND
C-COMB
9V-2
Y-COMB
COMB-THRU
GND
NC
NC
NC
NC
3D - Y/C
10
11
12
13
14



+5V-2
QA01
TMP87CS38N-XXXX
CA43
0.01
VDD
SDA-ITT
SCL-ITT
I²C STP
SDA1
SCL1
SYNC-AV1
RMT
PIP RST
RST
XOUT
XIN
GND
OSC
OSC
VSYNC
HSYNC
YS/YM
B
G
R
GND
PIP VOL
RMT OUT
MUTE
EXT MUTE
POWER-2
POWER-1
LED
POWER LNB
CONV MUTE
SCL0
SDA0
SYNC-VCD
AFT2 IN
MODE
AFT1 IN
KEY-A
KEY-B
SGV
SGA
VSS
/CONV MUTE
RA02 2.7K
RA03 1K
RA04 1K
RA05 1K
RA06 1K
RA07 1K
RA08 1K
RA09 1K
RA061 10K
RA071 10K
RA10 10K
RA01 47Ω
CA68 16V10μ
CA69 0.01
QA02
AT24C16-10PC (RA)
S-24C6ADPA-01 (RB)
VDD
WP
SCL
SDA
A0
A1
A2
GND
RA62 10K
DA69
MTZJ6.2B
or RD6.2ESA
RA61 10K
RA13 6.8K
CA13 100P
RA14 OPEN
RA15 1K
RA151 33K
RA152 TAIOU
RA70 33K
RA75 33K
RA16 1K
RA17 1K
RA18 1K
RB44 10K
RB43 10K
RB40 10K
RB42 15K
RB45 100
RB41 820
SGA
SGV
+9V-1
KEY A
KEY B
MUTE
EXT MUTE
RD83 1K
RD82 4.7K
DD80 1SS133
CD80 16V10μ
QD80
2SA933S,Q
or 2SA564A-Q,TH
or 2SA1015Y
RD80 8.2K
QB03 RN1205
RB03 100
PA02 4P
GJ80
GJ81
GJ82
GJ83
GJ84
GJ85
5V-1
RMT-OUT
RMT-IN
GND
TO RMT IN PB11
PA01 6P
GJ86
GJ87
GJ88
GJ89
KEY-2
KEY-1
KEY GND
GND
LED
5V-1
TO FRONT CON PB12
C532
16V100μ
GND
FSC
5V-2
V-AV
GND
C-COMB
9V-2
Y-COMB
COMB-THRU
GND
NC
NC
NC
NC
3D - Y/C
G
H
I
J
K
L
13
14
15
16

GJ NO.		
GJ80	SHORT	OPEN
GJ81	OPEN	SHORT
GJ82	SHORT	OPEN
GJ83	OPEN	SHORT
GJ84	SHORT	OPEN
GJ85	OPEN	SHORT
GJ86	SHORT	OPEN
GJ87	OPEN	SHORT
GJ88	SHORT	OPEN
GJ89	OPEN	SHORT

SCHEMATIC DIAGRAM MODEL : 50N9UXE / 50N9UXH (2/6)
50N9UXA / 50N9UXM

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 3. Do not degrade the safety of the receiver through improper servicing.

040-9909

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position. Set other controls for best picture.

NOTES:

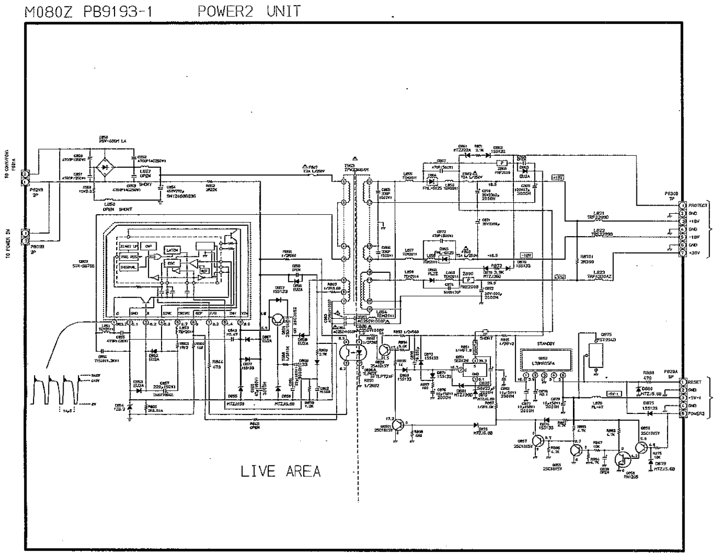
1. D.C. resistance value of a principal transformer is shown in this schematic diagram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH, and the values less than 1 in H.

	50N9UXC 43N9UXC 61N9UXC	OTHER MOEL
PC BOARD	PB8486N-1	PB9193-1



CAUTION

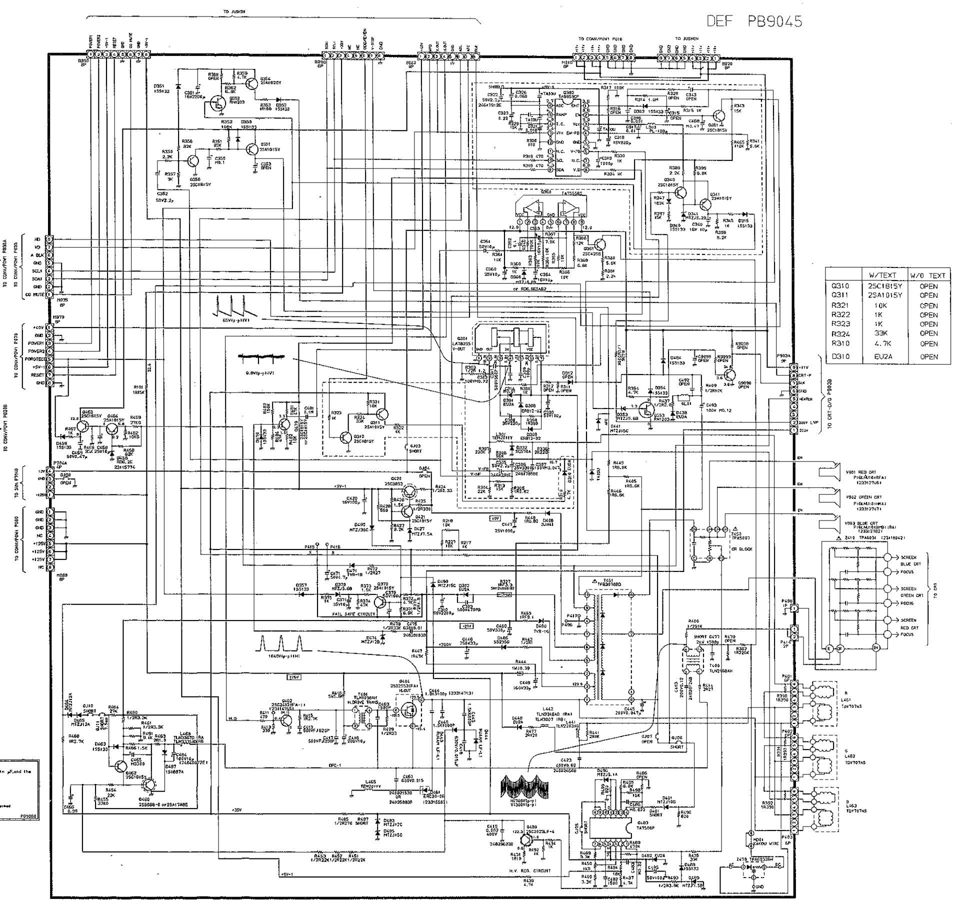
The grounding (⏚ mark) in the schematic diagram is separated from the other circuit ground (⏚ mark) to prevent possible shock hazard.

⏚ : Live ground
⏚ : Isolated ground

NOTE:

1. RESISTOR Resistance is shown in ohm (k = 1,000, M = 1,000,000). All resistors are 1/6W and 5% tolerance carbon resistor, unless otherwise noted as the following marks.
   - 1/2R : Metal or Metal oxide of 1/2 watt
   - 1/2S : Solid of 1/2 watt
   - 1RF : Fuse resistor of 1 watt
   - 10W : Cement of 10 watts
   - K = ±10% G = ±2% F = ±1%
2. CAPACITOR Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in μF, and the values more than 1 in pF. All capacitors are ceramic 50V, unless otherwise noted as the following marks.
   - ⊣⊢ Electrolytic capacitor
   - ⊣⊢ Mylar capacitor
3. The parts indicated with "⚠" have special characteristics should be replaced with identical parts only.
4. This schematic diagram is the latest the time of copying, so it must be changed in accordance with all informed modification notices.

P09060



	W/TEXT	W/0 TEXT
Q310	2SC1815Y	OPEN
Q311	2SA1015Y	OPEN
R321	10K	OPEN
R322	1K	OPEN
R323	1K	OPEN
R324	33K	OPEN
R310	4.7K	OPEN
D310	EU2A	OPEN

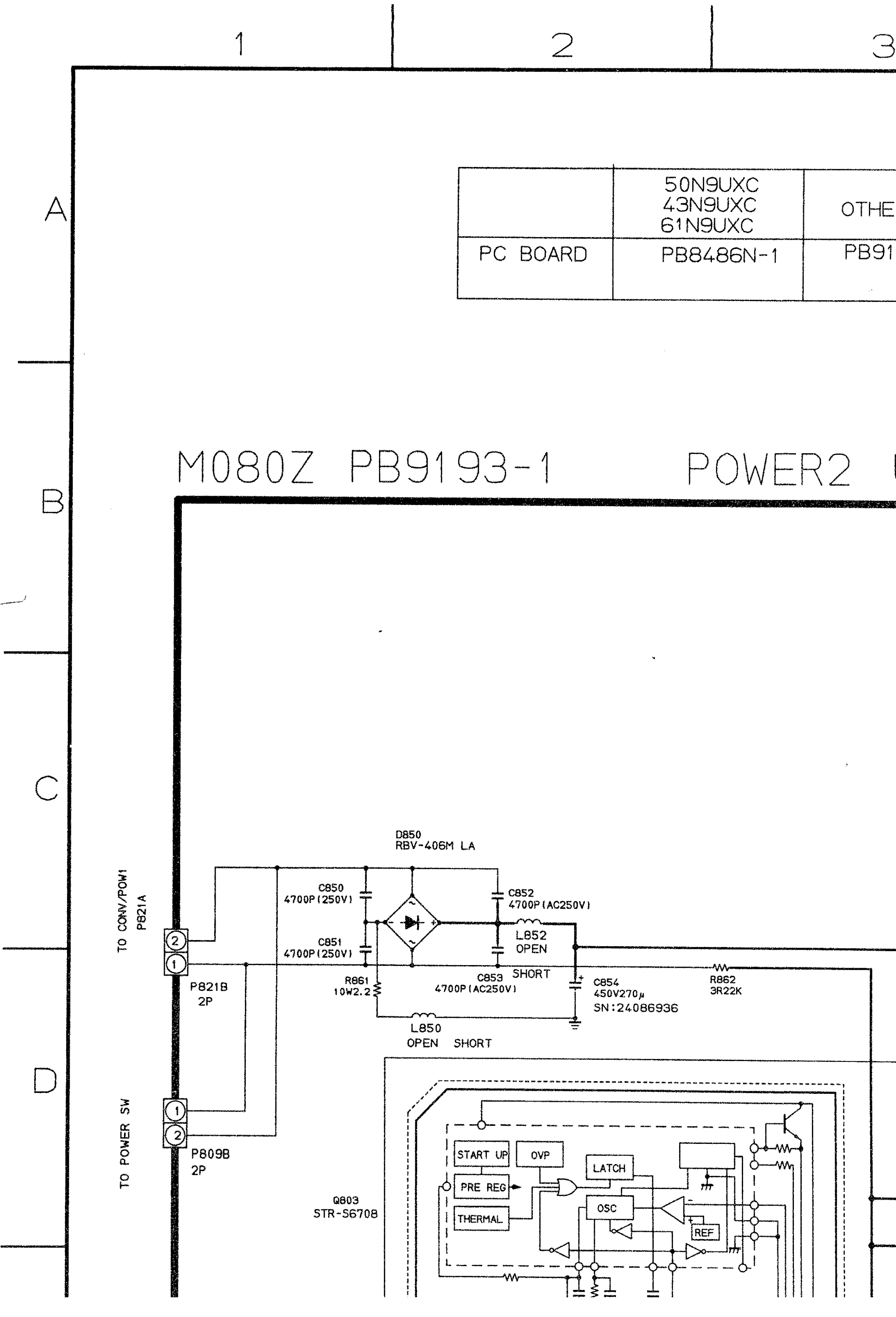
43N9UXE 43N9UXA 43N9UXM 43N9UXR	43N9UXH 43N9UXK	50N9UXE 50N9UXA 50N9UXM 50N9UXR	50N9UXH	50N9UXC	43N9UXC	61N9UXC
PB9046	PB9253	PB9045	PB9252	PB9045D	PB9045F	PB9045G

SCHEMATIC DIAGRAM MODEL : 50N9UXE / 50N9UXH

50N9UXA / 50N9UXN

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identica those in the original circuit or specified in the parts list. The mounting position of replacements is to be identica with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on p 3. Do not degrade the safety of the receiver through improper servicing.

040-9909



	50N9UXC 43N9UXC 61N9UXC	OTHE
PC BOARD	PB8486N-1	PB91

1
2
3
A
B
C
D
M080Z PB9193-1 POWER2
D850
RBV-406M LA
C850
4700P(250V)
C851
4700P(250V)
C852
4700P(AC250V)
L852
OPEN
C853
4700P(AC250V)
SHORT
R861
10W2.2
L850
OPEN SHORT
C854
450V270μ
SN:24086936
R862
3R22K
TO CONV/POW1
P821A
P821B
2P
TO POWER SW
P809B
2P
Q803
STR-S6708
START UP
OVP
LATCH
PRE REG
THERMAL
OSC
REF

50N9UXH (2/6)
50N9UXM

designate com-
vith types identical to
s is to be identical
ETY NOTICE on page

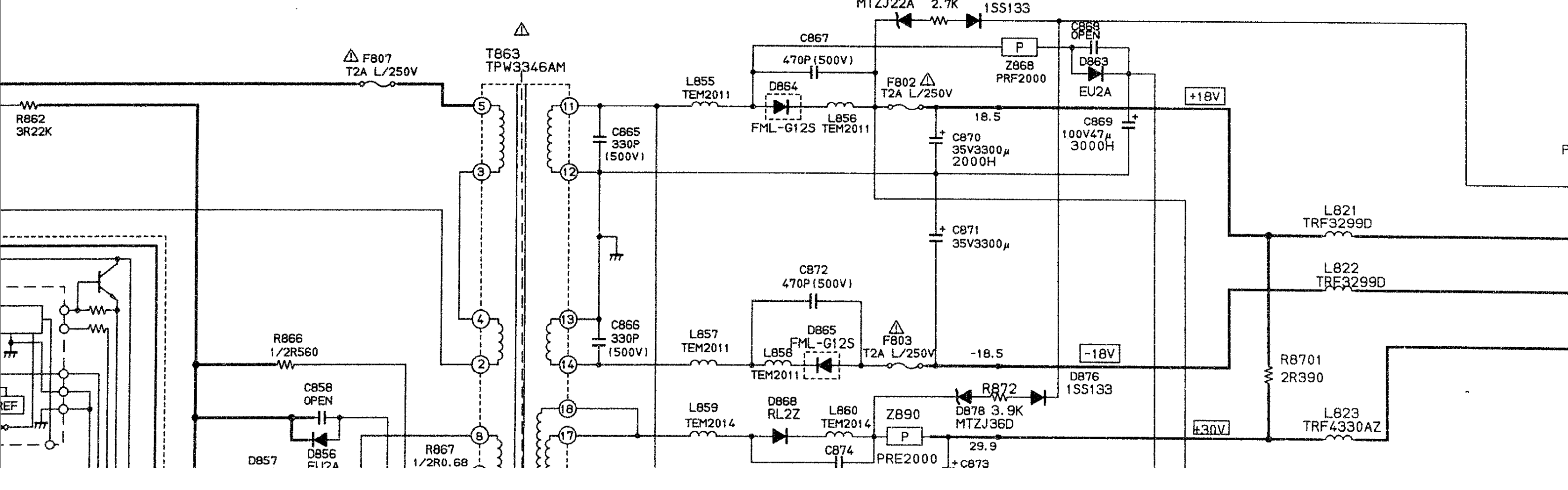
OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position. Set other controls for best picture.

3 4 5 6

N9UXC N9UXC N9UXC	OTHER MOEL
3486N-1	PB9193-1

POWER2 UNIT



R862
3R22K
F807
T2A L/250V
T863
TPW3346AM
C865
330P
(500V)
C866
330P
(500V)
R866
1/2R560
C858
OPEN
D856
EU2A
D857
R867
1/2R0.68
REF
L855
TEM2011
L857
TEM2011
L859
TEM2014
D861
MTZJ22A
R871
2.7K
D862
1SS133
C867
470P(500V)
D864
FML-G12S
L856
TEM2011
F802
T2A L/250V
Z868
PRF2000
C868
OPEN
D863
EU2A
+18V
18.5
C870
35V3300µ
2000H
C869
100V47µ
3000H
C871
35V3300µ
C872
470P(500V)
D865
FML-G12S
L858
TEM2011
F803
T2A L/250V
-18.5
-18V
D876
1SS133
R872
D878 3.9K
MTZJ36D
D868
RL2Z
L860
TEM2014
Z890
P
PRE2000
C874
29.9
C873
+30V
L821
TRF3299D
L822
TRF3299D
R8701
2R390
L823
TRF4330AZ

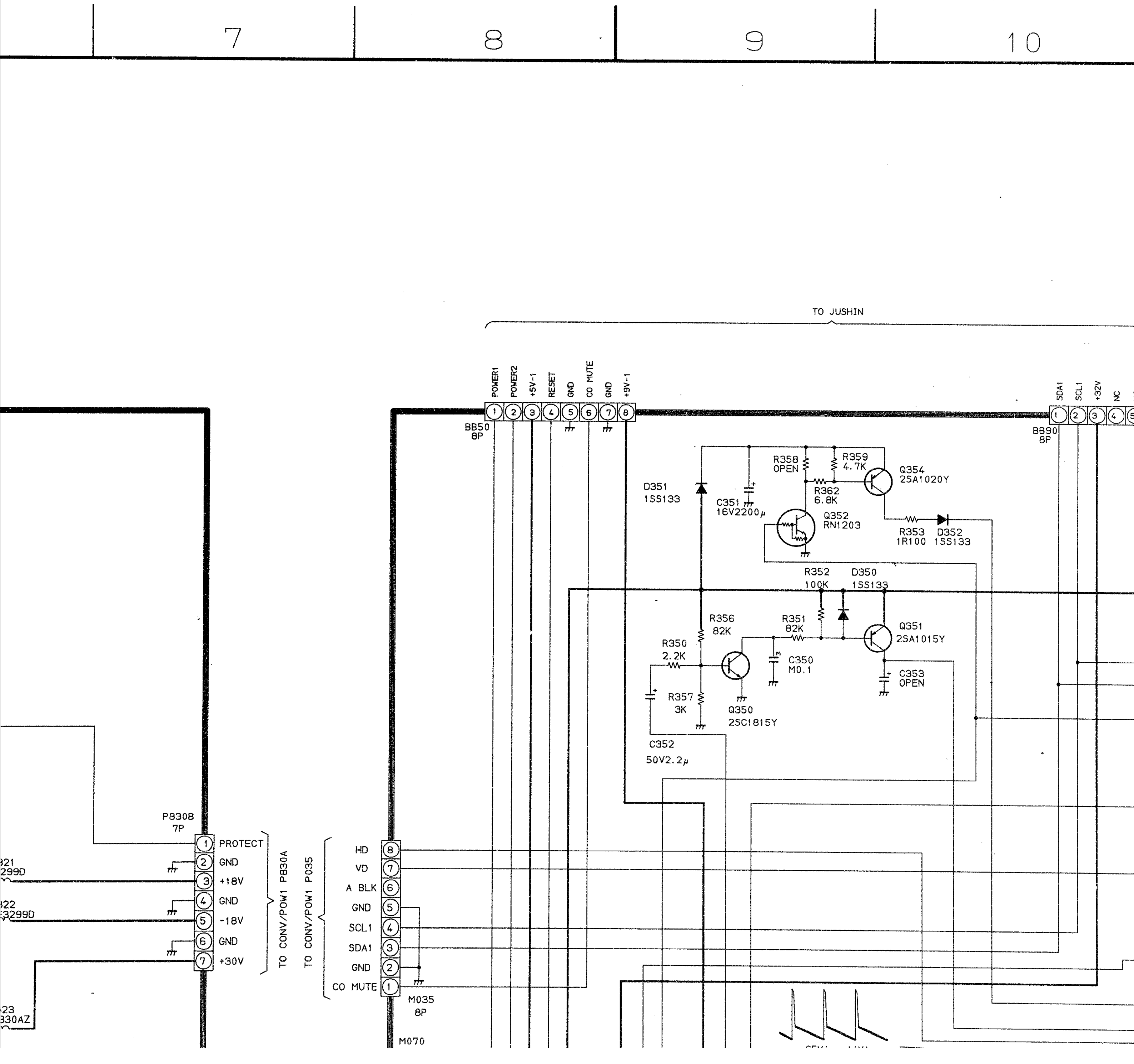
, line voltage 220

w capacity probe.

nid position and
r controls for best

NOTES:

1. D.C. resistance value of a principal transformer is shown in this schema gram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.

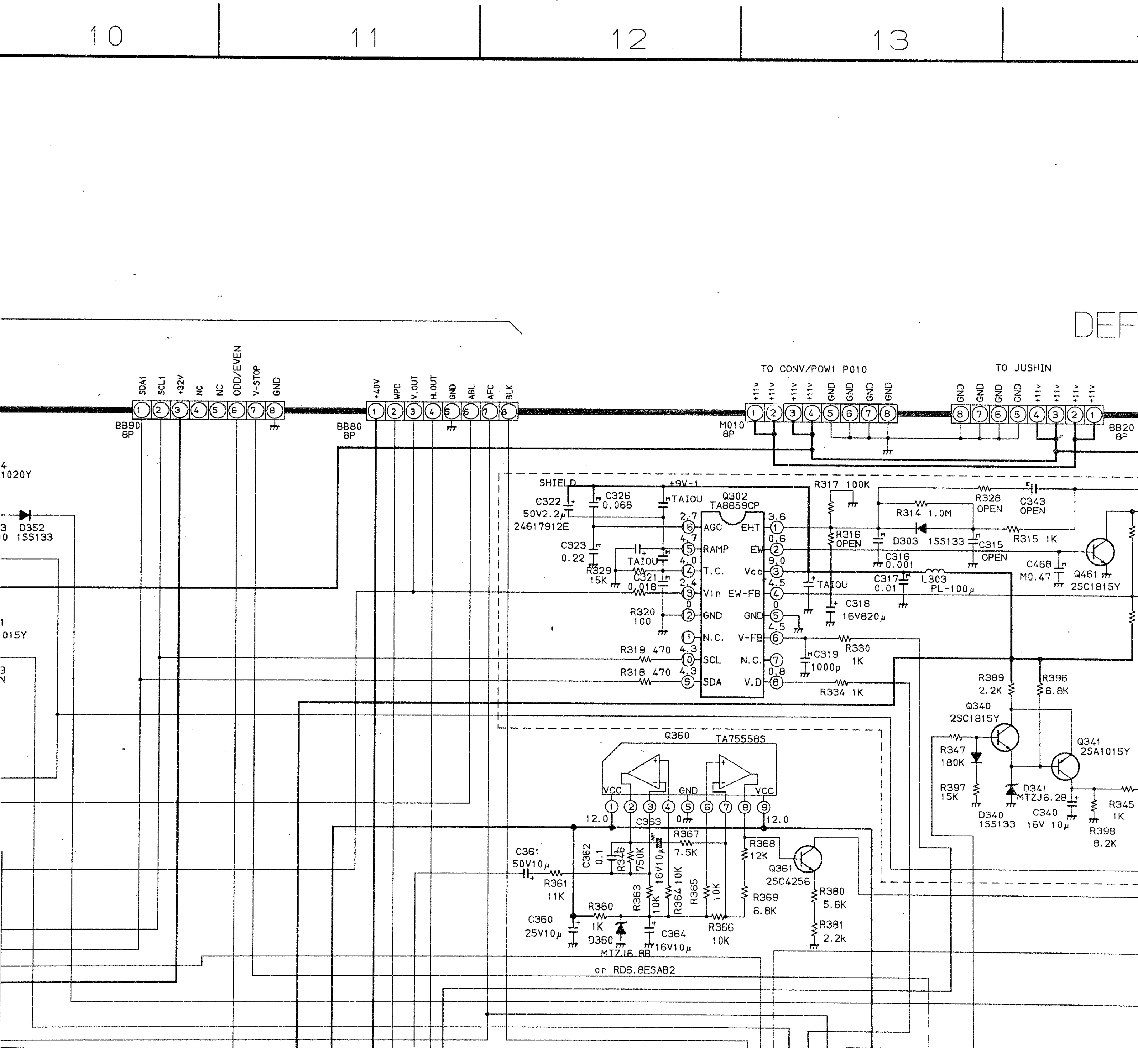

7
8
9
10
TO JUSHIN
POWER1
POWER2
+5V-1
RESET
GND
CO MUTE
GND
+9V-1
BB50
8P
SDA1
SCL1
+32V
NC
BB90
8P
R358
OPEN
R359
4.7K
Q354
2SA1020Y
R362
6.8K
D351
1SS133
C351
16V2200μ
Q352
RN1203
R353
1R100
D352
1SS133
R352
100K
D350
1SS133
R356
82K
R351
82K
Q351
2SA1015Y
R350
2.2K
C350
M0.1
C353
OPEN
R357
3K
Q350
2SC1815Y
C352
50V2.2μ
P830B
7P
PROTECT
GND
+18V
GND
-18V
GND
+30V
321
299D
322
3299D
323
330AZ
TO CONV/POW1 P830A
TO CONV/POW1 P035
HD
VD
A BLK
GND
SCL1
SDA1
GND
CO MUTE
M035
8P
M070

shown in this schematic dia-
ircuit.

EXPRESSION

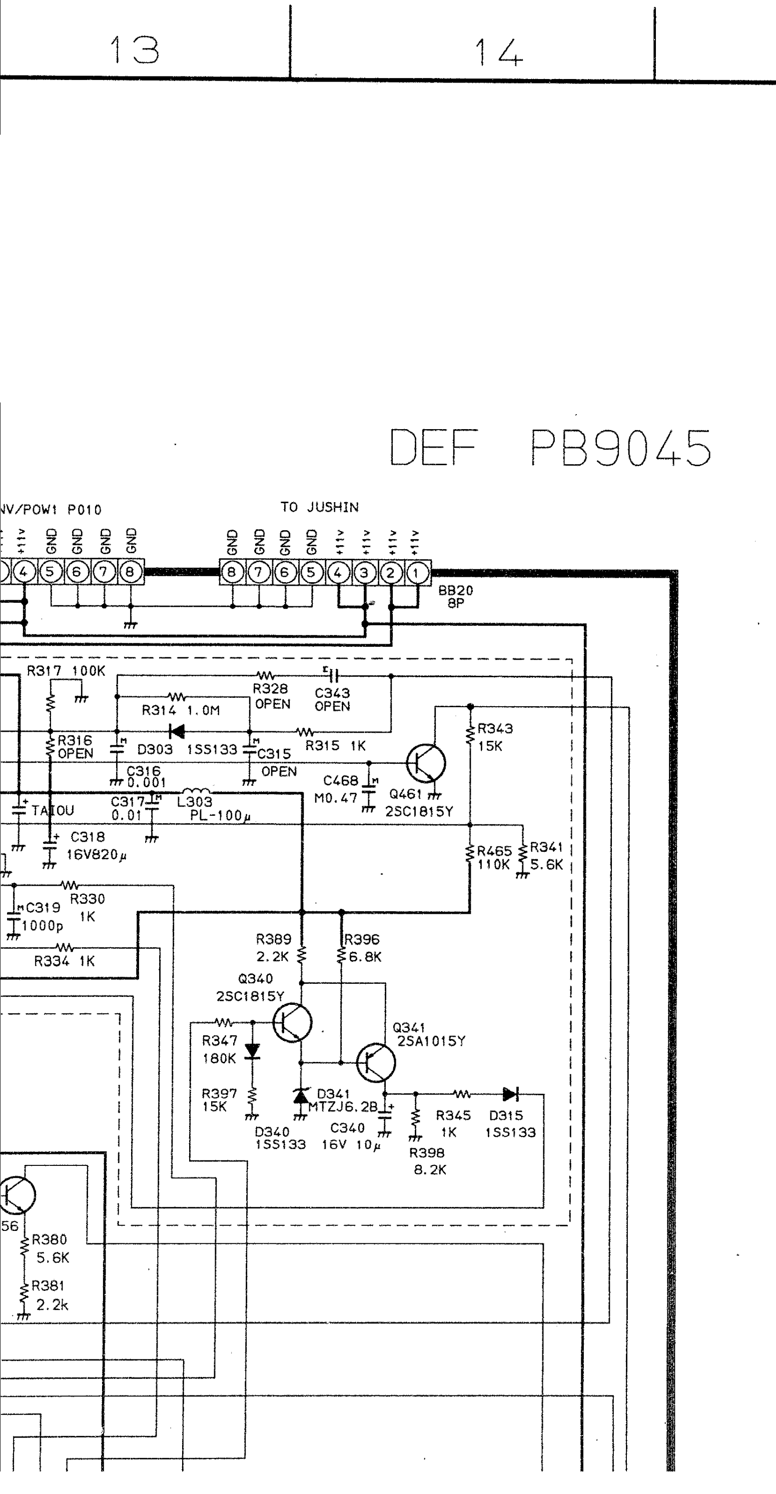
VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less
   sed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more
   sed in μH, and the values less than 1 in H.


10
11
12
13
DEF
SDA1
SCL1
+32V
NC
NC
ODD/EVEN
V-STOP
GND
BB90
8P
+40V
WPD
V.OUT
H.OUT
GND
ABL
AFC
BLK
BB80
8P
TO CONV/POW1 P010
+11v
GND
M010
8P
TO JUSHIN
BB20
8P
1020Y
D352
1SS133
015Y
SHIELD
+9V-1
C322
50V2.2μ
24617912E
C326
0.068
TAIOU
Q302
TA8859CP
C323
0.22
R329
15K
C321
0.018
R320
100
R319 470
R318 470
AGC
RAMP
T.C.
Vin
GND
N.C.
SCL
SDA
EHT
EW
Vcc
EW-FB
GND
V-FB
N.C.
V.D
2.7
4.7
4.0
2.4
0
4.3
4.3
3.6
0.6
9.0
4.5
0
4.5
0.8
R317 100K
R316
OPEN
R314 1.0M
D303 1SS133
R328
OPEN
C343
OPEN
R315 1K
C315
OPEN
C316
0.001
C317
0.01
L303
PL-100μ
C318
16V820μ
C319
1000p
R330
1K
R334 1K
C468
M0.47
Q461
2SC1815Y
R389
2.2K
R396
6.8K
Q340
2SC1815Y
R347
180K
R397
15K
D340
1SS133
D341
MTZJ6.2B
C340
16V 10μ
Q341
2SA1015Y
R345
1K
R398
8.2K
Q360
TA75558S
VCC
GND
VCC
12.0
12.0
C363
0
C361
50V10μ
R361
11K
C362
0.1
R346
750K
16V10μ
R367
7.5K
R368
12K
Q361
2SC4256
R363
10K
R364 10K
R365
10K
R369
6.8K
R380
5.6K
R381
2.2k
R360
1K
C360
25V10μ
D360
MTZJ6.8B
or RD6.8ESAB2
C364
16V10μ
R366
10K

PACITOR and INDUCTOR

, k=1,000, M=1,000,000
schematic, all capacitor values less than 1 are expres-
re than 1 in pF.
schematic, all inductor values more than 1 are expres-
ss than 1 in H.



13
14
15
16
A
B
C
D
DEF PB9045
NV/POW1 P010
TO JUSHIN
+11V
GND
BB20
8P
R317 100K
R328
OPEN
C343
OPEN
R314 1.0M
R316
OPEN
D303 1SS133
C315
OPEN
R315 1K
R343
15K
C316
0.001
C468
M0.47
Q461
2SC1815Y
TAIOU
C317
0.01
L303
PL-100µ
C318
16V820µ
R465
110K
R341
5.6K
C319
1000p
R330
1K
R334 1K
R389
2.2K
R396
6.8K
Q340
2SC1815Y
Q341
2SA1015Y
R347
180K
R397
15K
D341
MTZJ6.2B
D340
1SS133
C340
16V 10µ
R345
1K
D315
1SS133
R398
8.2K
56
R380
5.6K
R381
2.2k

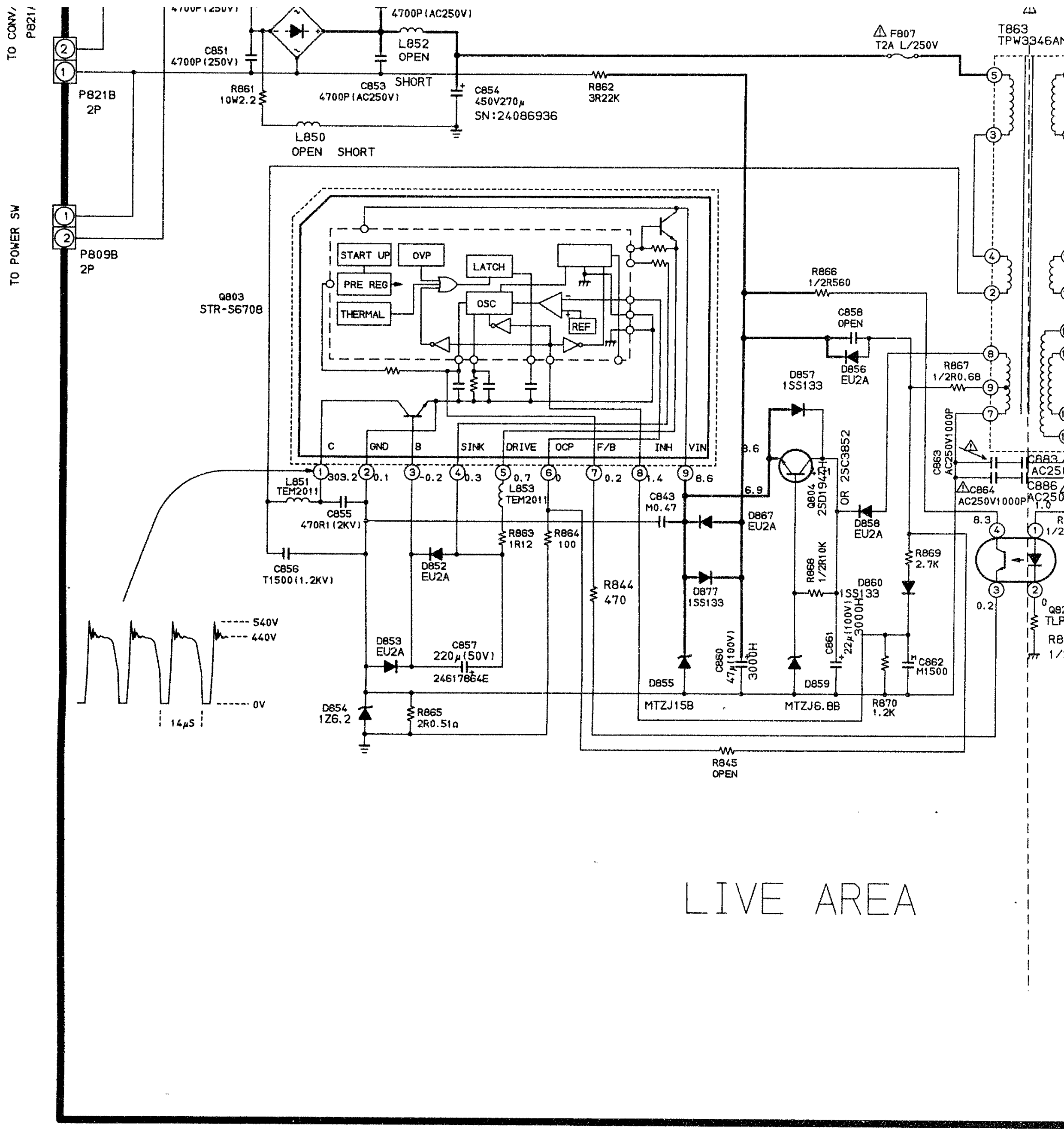
	W/TEXT	W/O TEXT
Q310	2SC1815Y	OPEN
Q311	2SA1015Y	OPEN
R321	10K	OPEN
R322	1K	OPEN
R323	1K	OPEN

D

E

F

G


TO CONV/ P821/
P821B 2P
TO POWER SW
P809B 2P
4700P(250V)
C851 4700P(250V)
4700P(AC250V)
L852 OPEN
C853 4700P(AC250V)
SHORT
R861 10W2.2
C854 450V270μ SN:24086936
L850 OPEN SHORT
R862 3R22K
F807 T2A L/250V
T863 TPW3346AN
Q803 STR-S6708
START UP
OVP
PRE REG
LATCH
THERMAL
OSC
REF
C
GND
B
SINK
DRIVE
OCP
F/B
INH
VIN
303.2
0.1
-0.2
0.3
0.7
0
0.2
1.4
8.6
L851 TEM2011
C855 470R1(2KV)
C856 T1500(1.2KV)
L853 TEM2011
R863 1R12
R864 100
D852 EU2A
D853 EU2A
C857 220μ(50V) 24617864E
D854 1Z6.2
R865 2R0.51Ω
R844 470
R845 OPEN
C843 M0.47
D867 EU2A
D877 1SS133
D855 MTZJ15B
C860 47μ(100V) 3000H
R866 1/2R560
C858 OPEN
D856 EU2A
D857 1SS133
Q804 2SD1942H OR 2SC3852
R868 1/2R10K
D858 EU2A
D860 1SS133
C861 22μ(100V) 3000H
D859 MTZJ6.8B
R869 2.7K
C862 M1500
R870 1.2K
R867 1/2R0.68
C863 AC250V1000P
C864 AC250V1000P
C883 AC250
C886 AC250
8.6
6.9
8.3
1.0
0.2
0
Q8
TLP
R8
540V
440V
0V
14μS
LIVE AREA

H

CAUTION

The grounding (⏚ mark) in the schematic diagram is separated from the other circuit ground (⏚ mark) to prevent possible shock hazard.

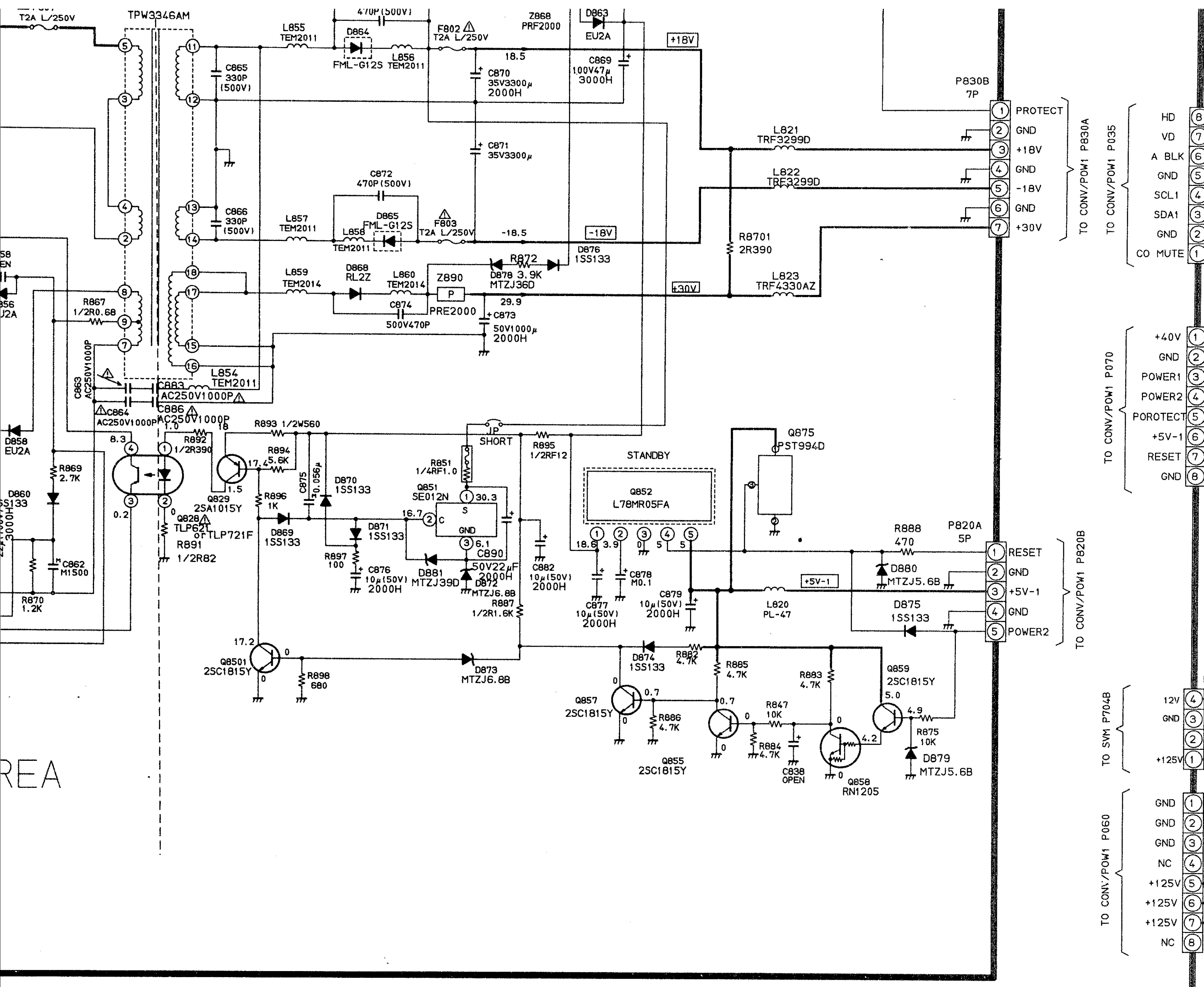
⏚ : Live ground
⏚ : Isolated ground

I

NOTE:

1. RESISTOR Resistance is shown in ohm [k = 1,000, M = 1,000,000]. All res
carbon resistor,unless otherwise noted as the following marks
1/2R : Metal or Metal oxide of 1/2 watt 1/2S
1RF : Fuse resistor of 1 watt 10W

K = ±10% G = ±2% F = ±1%

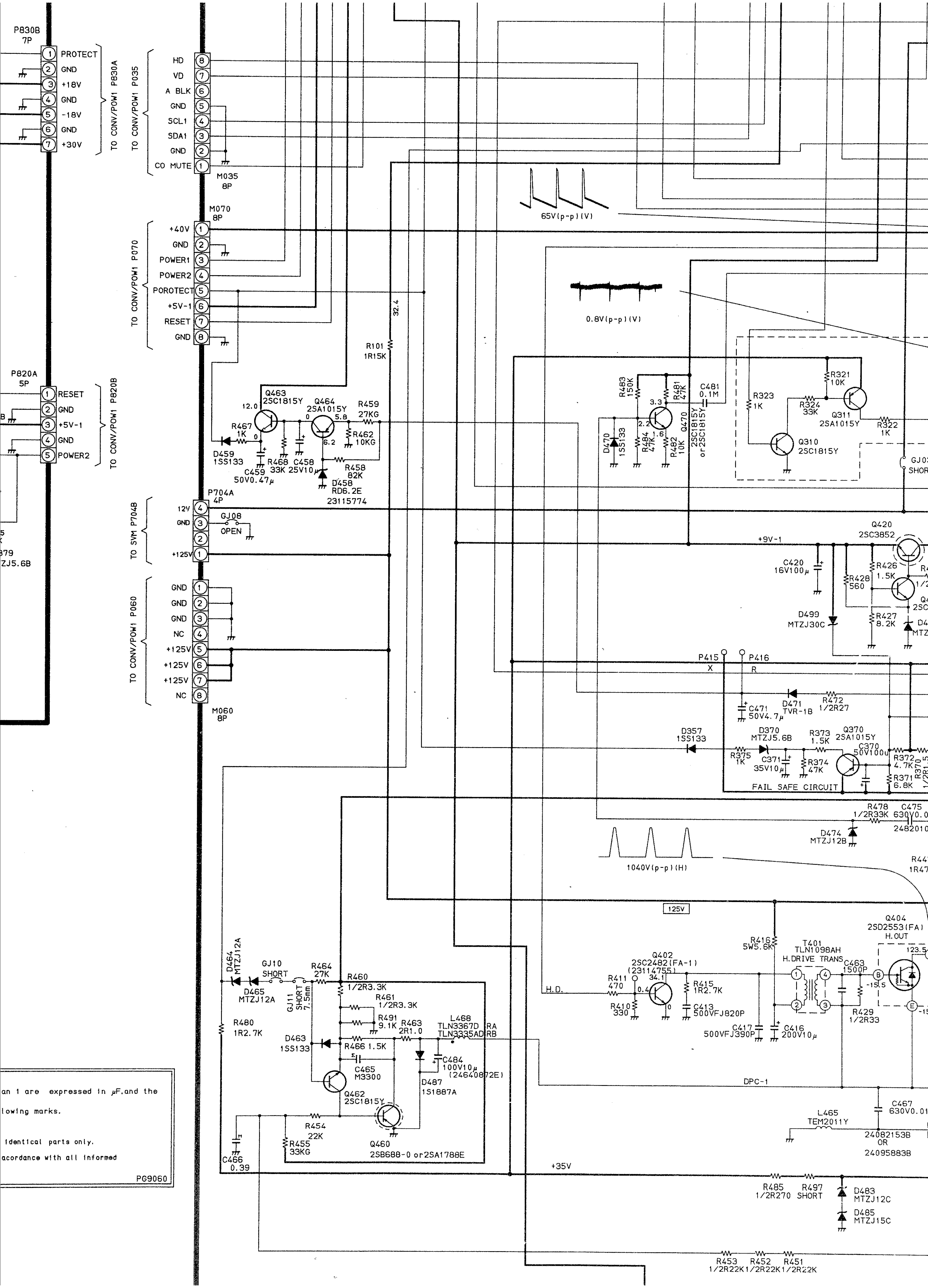

T2A L/250V
TPW3346AM
L855
TEM2011
470P(500V)
D864
FML-G12S
L856
TEM2011
F802
T2A L/250V
Z868
PRF2000
D863
EU2A
+18V
18.5
C865
330P
(500V)
C870
35V3300μ
2000H
C869
100V47μ
3000H
P830B
7P
PROTECT
GND
+18V
GND
-18V
GND
+30V
TO CONV/POW1 P830A
TO CONV/POW1 P035
HD
VD
A BLK
GND
SCL1
SDA1
GND
CO MUTE
L821
TRF3299D
L822
TRF3299D
C871
35V3300μ
C872
470P(500V)
D865
FML-G12S
F803
T2A L/250V
C866
330P
(500V)
L857
TEM2011
L858
TEM2011
-18.5
-18V
R8701
2R390
D876
1SS133
R872
3.9K
D878
MTZJ36D
L859
TEM2014
D868
RL2Z
L860
TEM2014
Z890
P
PRE2000
+30V
L823
TRF4330AZ
29.9
C874
500V470P
C873
50V1000μ
2000H
R867
1/2R0.68
C863
AC250V1000P
L854
TEM2011
C883
AC250V1000P
C864
AC250V1000P
C886
AC250V1000P
D858
EU2A
8.3
1.0
R892
1/2R390
18
R893 1/2W560
R894
5.6K
17.4
1.5
Q829
2SA1015Y
Q828
TLP621
or TLP721F
0.2
R891
1/2R82
R869
2.7K
D860
1SS133
C862
M1500
R870
1.2K
R896
1K
D869
1SS133
C875
0.056μ
D870
1SS133
R897
100
C876
10μ(50V)
2000H
D871
1SS133
JP
SHORT
R851
1/4RF1.0
Q851
SE012N
30.3
16.7
S
C
GND
6.1
C890
50V22μF
2000H
D881
MTZJ39D
D872
MTZJ6.8B
R887
1/2R1.6K
R895
1/2RF12
C882
10μ(50V)
2000H
STANDBY
Q852
L78MR05FA
18.6
3.9
0
5
5
C877
10μ(50V)
2000H
C878
M0.1
C879
10μ(50V)
2000H
Q875
PST994D
R888
470
P820A
5P
RESET
GND
+5V-1
GND
POWER2
TO CONV/POW1 P820B
D880
MTZJ5.6B
+5V-1
L820
PL-47
D875
1SS133
17.2
Q8501
2SC1815Y
R898
680
D873
MTZJ6.8B
D874
1SS133
R882
4.7K
R885
4.7K
R883
4.7K
Q859
2SC1815Y
5.0
4.9
Q857
2SC1815Y
0.7
R886
4.7K
0.7
R847
10K
R884
4.7K
C838
OPEN
Q855
2SC1815Y
Q858
RN1205
4.2
R875
10K
D879
MTZJ5.6B
REA
+40V
GND
POWER1
POWER2
POROTECT
+5V-1
RESET
GND
TO CONV/POW1 P070
12V
GND
+125V
TO SVM P704B
GND
GND
GND
NC
+125V
+125V
+125V
NC
TO CONV/POW1 P060

= 1,000. M = 1,000,000]. All resistors sre 1/6W and 5% tolerance
e noted as the following marks.
tal oxide of 1/2 watt 1/2S : Solid of 1/2 watt
r of 1 watt 10W : Cement of 10 watts
F = ±1%

2.CAPACITOR Unless otherwise noted in schematic.all capacitor valuse less than 1 are expressed in μF.and the values more than 1 in pF.
All capacitors are ceramic 50V. unless otherwise noted as the following marks.
Electrolitic capacitor Mylar capacitor

3. The parts indicated with "⚠" have specialcharacteristics should be replaced with identical parts only.

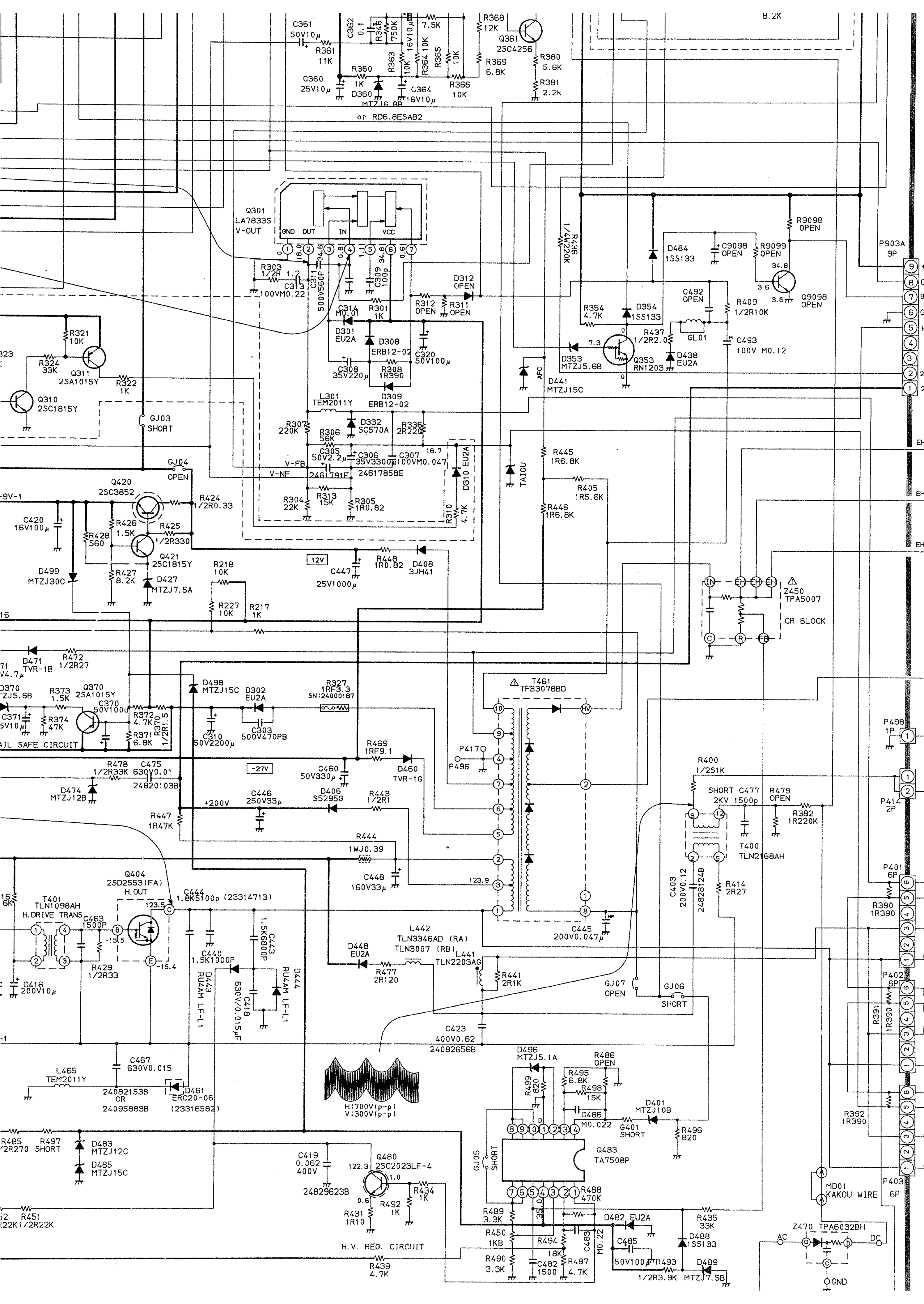
4. This schematic diagram is the latest the time of copying. so it must be changet in acordance with all informed modification notices.

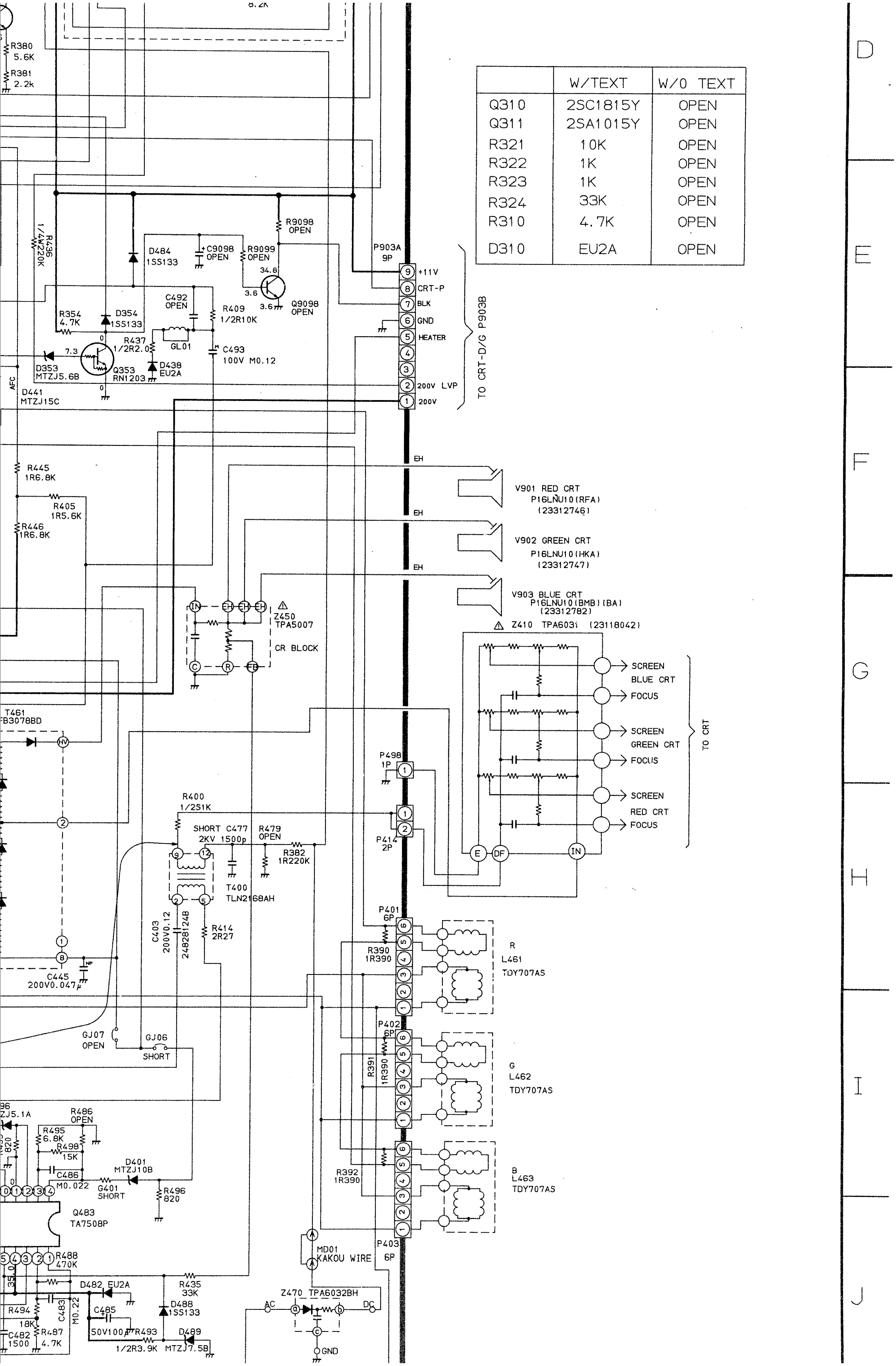

P830B
7P
PROTECT
GND
+18V
GND
-18V
GND
+30V
TO CONV/POW1 P830A
TO CONV/POW1 P035
HD
VD
A BLK
GND
SCL1
SDA1
GND
CO MUTE
M035
8P
M070
8P
TO CONV/POW1 P070
+40V
GND
POWER1
POWER2
POROTECT
+5V-1
RESET
GND
65V(p-p)(V)
0.8V(p-p)(V)
32.4
R101
1R15K
P820A
5P
RESET
GND
+5V-1
GND
POWER2
TO CONV/POW1 P820B
Q463
2SC1815Y
Q464
2SA1015Y
R459
27KG
12.0
0
5.8
6.2
R467
1K
R462
10KG
D459
1SS133
R468
33K
C458
25V10μ
C459
50V0.47μ
R458
82K
D458
RD6.2E
23115774
P704A
4P
TO SVM P704B
12V
GND
GJ08
OPEN
+125V
379
ZJ5.6B
TO CONV/POW1 P060
GND
GND
GND
NC
+125V
+125V
+125V
NC
M060
8P
R483
150K
R481
47K
C481
0.1M
3.3
2.2
1.6
D470
1SS133
R484
47K
R482
10K
Q470
2SC1815Y
or2SC1815Y
R321
10K
R323
1K
R324
33K
Q311
2SA1015Y
R322
1K
Q310
2SC1815Y
GJ0
SHOR
Q420
2SC3852
+9V-1
C420
16V100μ
R426
1.5K
R428
560
R427
8.2K
D499
MTZJ30C
P415
P416
X
R
C471
50V4.7μ
D471
TVR-1B
R472
1/2R27
D357
1SS133
D370
MTZJ5.6B
R373
1.5K
Q370
2SA1015Y
C370
50V100μ
R375
1K
C371
35V10μ
R374
47K
R372
4.7K
R371
6.8K
FAIL SAFE CIRCUIT
R478
1/2R33K
C475
630V0.0
2482010
D474
MTZJ12B
1040V(p-p)(H)
R44
1R47
125V
Q404
2SD2553(FA)
H.OUT
123.5
D464
MTZJ12A
GJ10
SHORT
R464
27K
R460
1/2R3.3K
D465
MTZJ12A
GJ11
SHORT
7.5mm
R461
1/2R3.3K
R491
9.1K
R463
2R1.0
L468
TLN3367D
TLN3335AD
RA
RB
R480
1R2.7K
D463
1SS133
R466 1.5K
C465
M3300
C484
100V10μ
(24640872E)
D487
1S1887A
Q462
2SC1815Y
R454
22K
R455
33KG
Q460
2SB688-0 or2SA1788E
C466
0.39
+35V
R416
5W5.6K
Q402
2SC2482(FA-1)
(23114755)
34.1
0.4
0
R411
470
R410
330
H.D.
R415
1R2.7K
C413
500VFJ820P
T401
TLN1098AH
H.DRIVE TRANS
C463
1500P
-15.5
R429
1/2R33
C417
500VFJ390P
C416
200V10μ
DPC-1
C467
630V0.01
L465
TEM2011Y
24082153B
OR
24095883B
R485
1/2R270
R497
SHORT
D483
MTZJ12C
D485
MTZJ15C
R453
1/2R22K
R452
1/2R22K
R451
1/2R22K

an 1 are expressed in μF,and the
lowing marks.

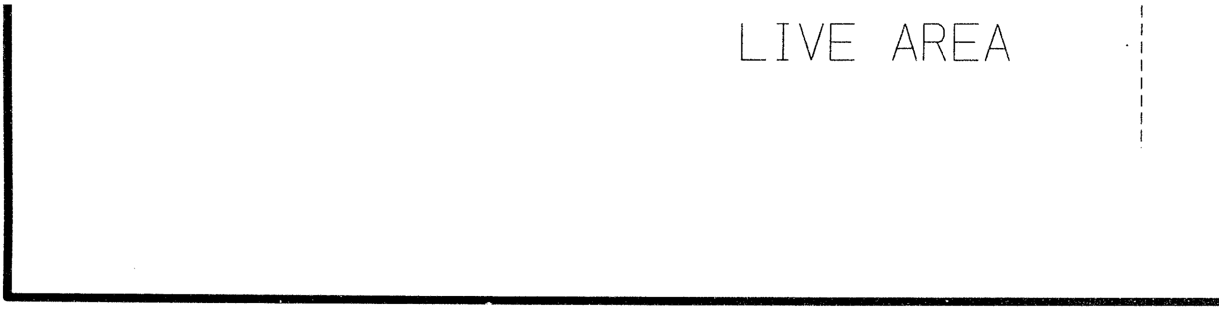
identical parts only.
acordance with all informed

PG9060


8.2K
C361 50V10μ
R361 11K
C362 0.1
R346 750K
16V10μ
7.5K
R363 10K
R364 10K
R365
10K
R368 12K
R369 6.8K
Q361 2SC4256
R380 5.6K
R381 2.2k
C360 25V10μ
R360 1K
D360 MTZJ6.8B
or RD6.8ESAB2
C364 16V10μ
R366 10K
Q301 LA7833S V-OUT
GND OUT IN VCC
R303 1/2R 1.2
C313 100VM0.22
C311 500V560P
C309 100p
R301 1K
C314 M0.01
R312 OPEN
R311 OPEN
D312 OPEN
D301 EU2A
D308 ERB12-02
C320 50V100μ
C308 35V220μ
R308 1R390
D309 ERB12-02
L301 TEM2011Y
R307 220K
R306 56K
D332 SC570A
R336 2R220
C305 50V2.2μ
C306 35V3300μ
C307 100VM0.047
16.7
D310 EU2A
V-FB
V-NF
2461791F
24617858E
R304 22K
R313 15K
R305 1R0.82
R310 4.7K
R436 1/4W220K
D484 1SS133
C9098 OPEN
R9099 OPEN
R9098 OPEN
Q9098 OPEN
34.8
3.6
C492 OPEN
R409 1/2R10K
R354 4.7K
D354 1SS133
R437 1/2R2.0
GL01
C493 100V M0.12
D353 MTZJ5.6B
7.3
Q353 RN1203
D438 EU2A
AFC
D441 MTZJ15C
P903A 9P
R321 10K
R324 33K
Q311 2SA1015Y
R322 1K
Q310 2SC1815Y
GJ03 SHORT
GJ04 OPEN
Q420 2SC3852
R424 1/2R0.33
+9V-1
C420 16V100μ
R426 1.5K
R425 1/2R330
R428 560
Q421 2SC1815Y
R427 8.2K
D427 MTZJ7.5A
D499 MTZJ30C
12V
C447 25V1000μ
R448 1R0.82
D408 3JH41
R218 10K
R227 10K
R217 1K
TAIOU
R445 1R6.8K
R405 1R5.6K
R446 1R6.8K
IN EH EH EH
Z450 TPA5007
CR BLOCK
C R FB
D471 TVR-1B
R472 1/2R27
Q370 2SA1015Y
R373 1.5K
R374 47K
D370 MTZJ5.6B
C371
C370 50V100μ
R372 4.7K
R371 6.8K
R370 1/2R1.5
FAIL SAFE CIRCUIT
D498 MTZJ15C
D302 EU2A
C310 50V2200μ
C303 500V470PB
R327 1RF3.3
SN:24000187
T461 TFB3078BD
HV
P417
P496
R478 1/2R33K
C475 630V0.01
24820103B
D474 MTZJ12B
-27V
C460 50V330μ
R469 1RF9.1
D460 TVR-1G
+200V
C446 250V33μ
D406 S5295G
R443 1/2R1
R447 1R47K
R444 1WJ0.39
C448 160V33μ
123.9
Q404 2SD2553(FA) H.OUT
C444 1.8K5100p (23314713)
123.5
T401 TLN1098AH H.DRIVE TRANS
C463 1500P
-15.5
-15.4
R429 1/2R33
C416 200V10μ
C440 1.5K1000P
C443 1.5K6800P
D443 RU4AM LF-L1
D444 RU4AM LF-L1
C418 630V/0.015μF
D448 EU2A
R477 2R120
L442 TLN3346AD (RA) TLN3007 (RB)
L441 TLN2203AG
R441 2R1K
C445 200V0.047μ
R400 1/2S1K
SHORT C477 2KV 1500p
R479 OPEN
R382 1R220K
T400 TLN2168AH
C403 200V0.12
24828124B
R414 2R27
GJ07 OPEN
GJ06 SHORT
C423 400V0.62
24082656B
P498 1P
P414 2P
P401 6P
R390 1R390
P402 6P
R391 1R390
R392 1R390
P403 6P
L465 TEM2011Y
C467 630V0.015
24082153B OR 24095883B
D461 ERC20-06 (23316582)
H:700V(p-p)
V:300V(p-p)
D496 MTZJ5.1A
R486 OPEN
R499 820
R495 6.8K
R498 15K
C486 M0.022
D401 MTZJ10B
G401 SHORT
R496 820
GJ05 SHORT
Q483 TA7508P
R488 470K
R485 1/2R270
R497 SHORT
D483 MTZJ12C
D485 MTZJ15C
C419 0.062 400V
24829623B
Q480 2SC2023LF-4
122.3
1.0
0.6
R434 1K
R492 1K
R431 1R10
R451
1/2R22K 1/2R22K
H.V. REG. CIRCUIT
R489 3.3K
R450 1KB
R490 3.3K
R494 18K
C482 1500
C483 M0.22
R487 4.7K
35.0
D482 EU2A
C485 50V100μ
R493 1/2R3.9K
R435 33K
D488 1SS133
D489 MTZJ7.5B
R439 4.7K
MD01 KAKOU WIRE
Z470 TPA6032BH
AC DC
GND


8.2K
R380
5.6K
R381
2.2k
R436
1/4W220K
D484
1SS133
C9098
OPEN
R9099
OPEN
R9098
OPEN
34.8
3.6
3.6
Q9098
OPEN
P903A
9P
+11V
CRT-P
BLK
GND
HEATER
200V LVP
200V
TO CRT-D/G P903B
R354
4.7K
D354
1SS133
C492
OPEN
R409
1/2R10K
R437
1/2R2.0
GL01
C493
100V M0.12
7.3
D353
MTZJ5.6B
Q353
RN1203
D438
EU2A
AFC
D441
MTZJ15C
R445
1R6.8K
R405
1R5.6K
R446
1R6.8K
EH
V901 RED CRT
P16LNU10(RFA)
(23312746)
V902 GREEN CRT
P16LNU10(HKA)
(23312747)
V903 BLUE CRT
P16LNU10(BMB)(BA)
(23312782)
Z410 TPA6031 (23118042)
IN
Z450
TPA5007
CR BLOCK
C
R
FB
SCREEN
BLUE CRT
FOCUS
SCREEN
GREEN CRT
FOCUS
SCREEN
RED CRT
FOCUS
TO CRT
E
DF
T461
FB3078BD
HV
P498
1P
R400
1/2S1K
SHORT C477
2KV 1500p
R479
OPEN
R382
1R220K
P414
2P
T400
TLN2168AH
C403
200V0.12
24828124B
R414
2R27
C445
200V0.047μ
P401
6P
R390
1R390
R
L461
TDY707AS
GJ07
OPEN
GJ06
SHORT
P402
6P
R391
1R390
G
L462
TDY707AS
R486
OPEN
R495
6.8K
R498
15K
C486
M0.022
D401
MTZJ10B
G401
SHORT
R496
820
ZJ5.1A
820
R392
1R390
B
L463
TDY707AS
Q483
TA7508P
R488
470K
MD01
KAKOU WIRE
P403
6P
R435
33K
D482 EU2A
D488
1SS133
C485
50V100μ
R493
1/2R3.9K
D489
MTZJ7.5B
R494
18K
C483
M0.22
C482
1500
R487
4.7K
Z470 TPA6032BH
AC
DC
GND
D
E
F
G
H
I
J

	W/TEXT	W/0 TEXT
Q310	2SC1815Y	OPEN
Q311	2SA1015Y	OPEN
R321	10K	OPEN
R322	1K	OPEN
R323	1K	OPEN
R324	33K	OPEN
R310	4.7K	OPEN
D310	EU2A	OPEN



G

H

CAUTION

The grounding (⏚ mark) in the schematic diagram is separated from the other circuit ground (⊥ mark) to prevent possible shock hazard.

⏚ : Live ground
⊥ : Isolated ground

I

NOTE:

1. RESISTOR Resistance is shown in ohm [k = 1,000, M = 1,000,000]. All resistor
carbon resistor,unless otherwise noted as the following marks.
1/2R : Metal or Metal oxide of 1/2 watt 1/2S : So
1RF : Fuse resistor of 1 watt 10W : Cem

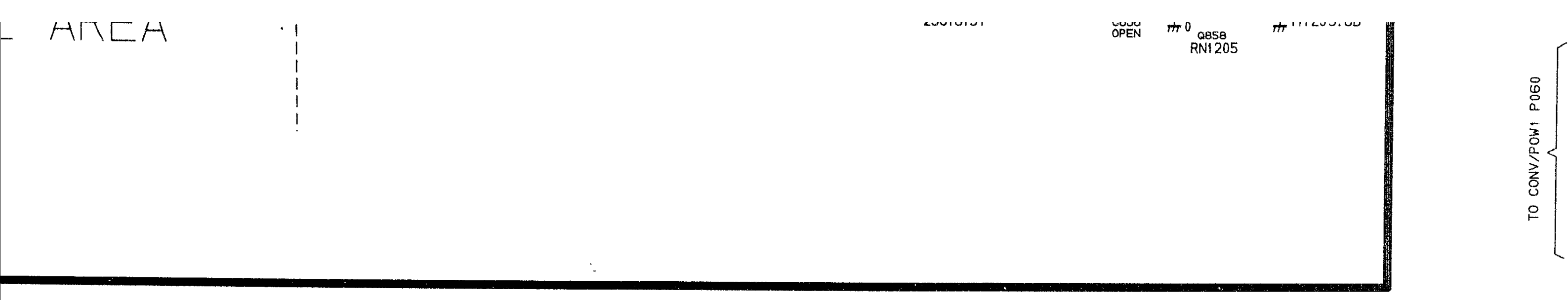
K = ±10% G = ±2% F = ±1%

J

K

L

1 2 3 4



schematic
other
revent

und

in ohm [k = 1,000. M = 1,000,000] , All resistors sre 1/6W and 5% tolerance
ss otherwise noted as the following marks.
Metal or Metal oxide of 1/2 watt 1/2S : Solid of 1/2 watt
use resistor of 1 watt 10W : Cement of 10 watts

% G = ±2% F = ±1%

2.CAPACITOR Unless otherwise noted in schematic.all capacitor valuse less than 1 are expressed in μF.and th
values more than 1 in pF.
All capacitors are ceramic 50V. unless otherwise noted as the following marks.

$\overset{+}{\dashv}\vdash$ Electrolitic capacitor $\overset{M}{\dashv\vdash}$ Mylar capacitor

3. The parts indicated with "⚠" have specialcharacteristics should be replaced with identical parts only.

4. This schematic diagram is the latest the time of copying. so it must be changet in acordance with all informed modification notices.

PG9

4	5	6	7

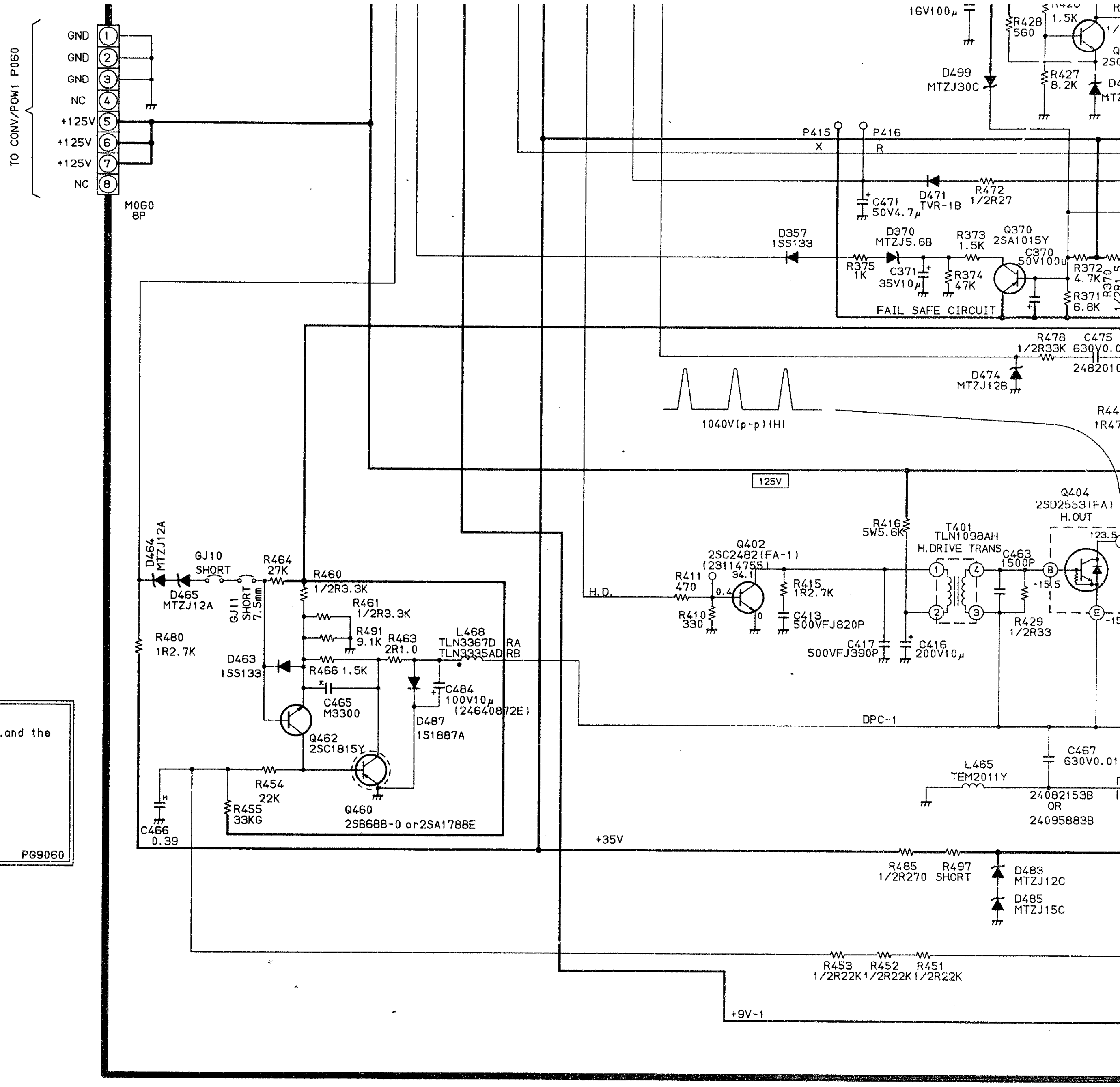
an t are expressed in μF,and the

lowing marks.

identical parts only.

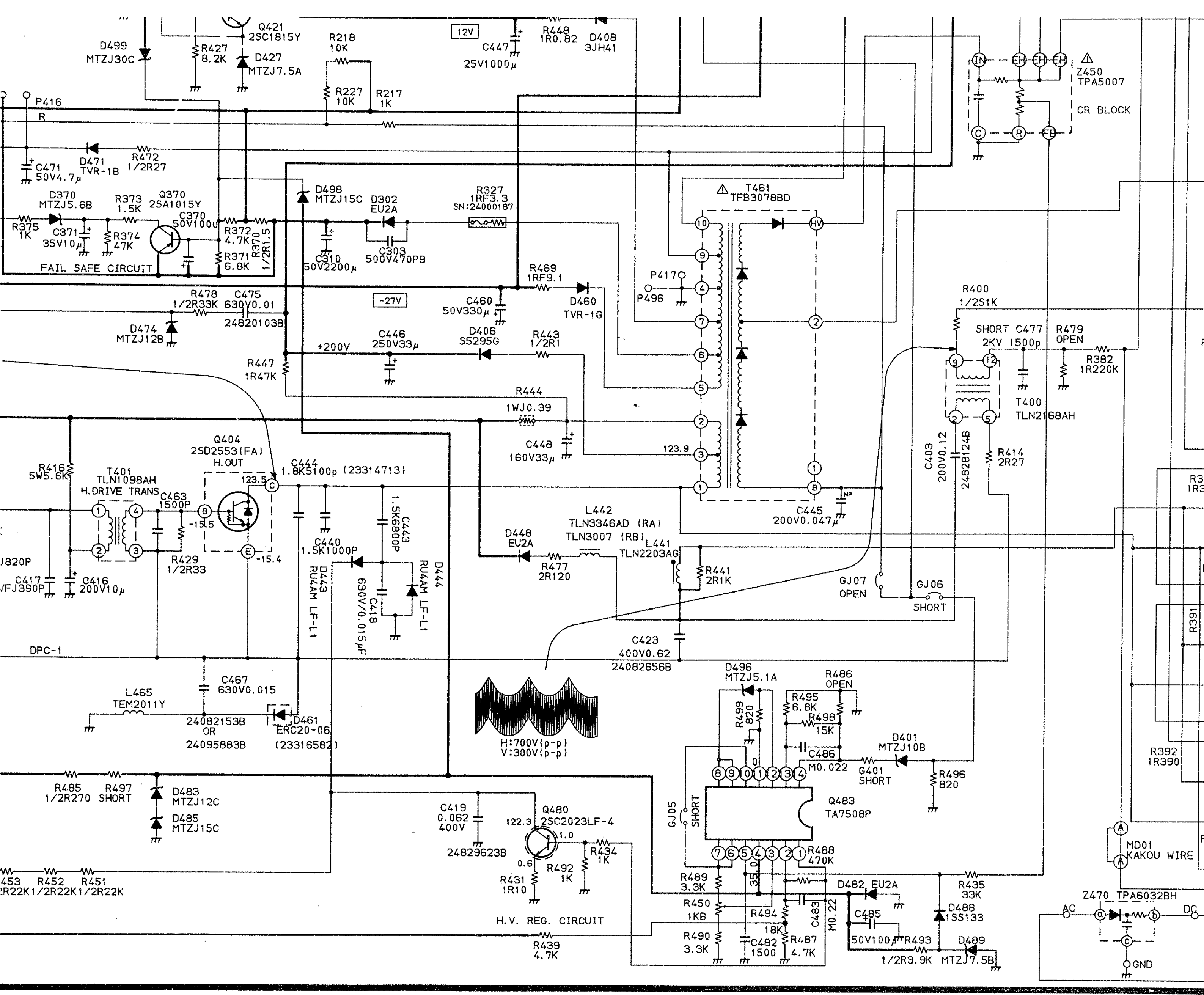
acordance with all informed

PG9060



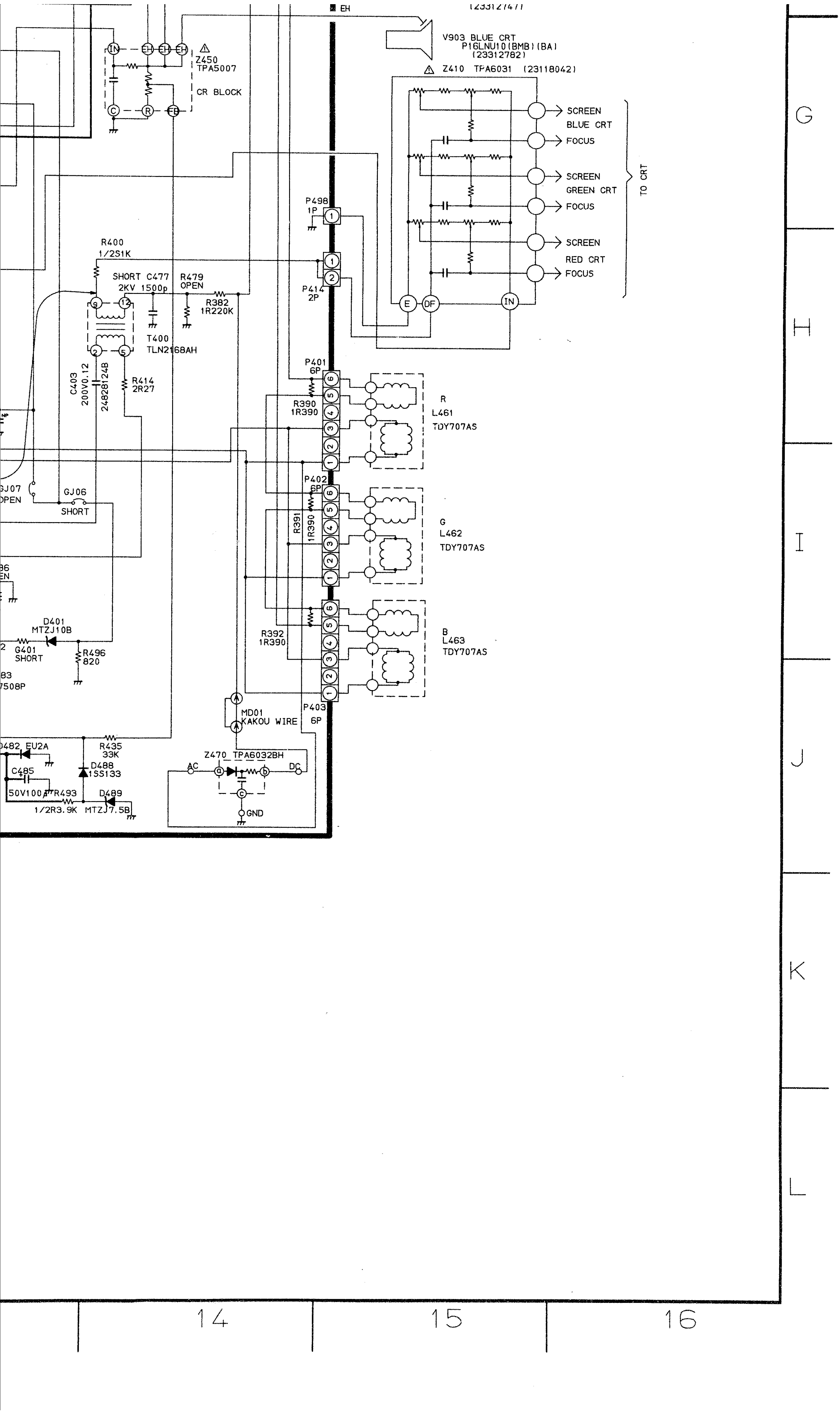
TO CONV/POW1 P060
GND 1
GND 2
GND 3
NC 4
+125V 5
+125V 6
+125V 7
NC 8
M060
8P
16V100μ
R428 560
1.5K
R427 8.2K
D499 MTZJ30C
P415
X
P416
R
C471 50V4.7μ
D471 TVR-1B
R472 1/2R27
D357 1SS133
D370 MTZJ5.6B
R373 1.5K
Q370 2SA1015Y
C370 50V100μ
R375 1K
C371 35V10μ
R374 47K
R372 4.7K
R371 6.8K
FAIL SAFE CIRCUIT
R478 1/2R33K
C475 630V0.0
248201
D474 MTZJ12B
1040V(p-p)(H)
R44
1R47
125V
Q404
2SD2553(FA)
H.OUT
123.5
R416 5W5.6K
T401 TLN1098AH
H.DRIVE TRANS
C463 1500P
Q402
2SC2482(FA-1)
(23114755)
34.1
R411 470
0.4
R415 1R2.7K
R410 330
0
C413 500VFJ820P
H.D.
C417 500VFJ390P
C416 200V10μ
R429 1/2R33
-15.5
D464 MTZJ12A
GJ10 SHORT
R464 27K
R460 1/2R3.3K
D465 MTZJ12A
GJ11 SHORT 7.5mm
R461 1/2R3.3K
R491 9.1K
R463 2R1.0
L468 TLN3367D TLN3335AD
RA RB
R480 1R2.7K
D463 1SS133
R466 1.5K
C465 M3300
C484 100V10μ (24640872E)
D487 1S1887A
Q462 2SC1815Y
DPC-1
C467 630V0.01
L465 TEM2011Y
24082153B OR 24095883B
R454 22K
R455 33KG
Q460 2SB688-0 or2SA1788E
C466 0.39
+35V
R485 1/2R270
R497 SHORT
D483 MTZJ12C
D485 MTZJ15C
R453 1/2R22K
R452 1/2R22K
R451 1/2R22K
+9V-1

43N9UXE 43N9UXA 43N9UXM 43N9UXR	43N9UXH 43N9UXK	50N9UXE 50N9UXA 50N9UXM 50N9UXR	50N9UXH	50N
PB9046	PB9253	PB9045	PB9252	PB90


D499
MTZJ30C
Q421
2SC1815Y
R427
8.2K
D427
MTZJ7.5A
R218
10K
12V
C447
25V1000μ
R448
1R0.82
D408
3JH41
R227
10K
R217
1K
P416
R
C471
50V4.7μ
D471
TVR-1B
R472
1/2R27
D370
MTZJ5.6B
R373
1.5K
Q370
2SA1015Y
C370
50V100μ
R375
1K
C371
35V10μ
R374
47K
R372
4.7K
R371
6.8K
R370
1/2R1.5
FAIL SAFE CIRCUIT
D498
MTZJ15C
D302
EU2A
C310
50V2200μ
C303
500V470PB
R327
1RF3.3
SN:24000187
T461
TFB3078BD
HV
P417
P496
Z450
TPA5007
CR BLOCK
R469
1RF9.1
D460
TVR-1G
C460
50V330μ
-27V
R478
1/2R33K
C475
630V0.01
24820103B
D474
MTZJ12B
C446
250V33μ
D406
S5295G
R443
1/2R1
+200V
R447
1R47K
R444
1WJ0.39
C448
160V33μ
123.9
R400
1/2S1K
SHORT C477
2KV 1500p
R479
OPEN
R382
1R220K
T400
TLN2168AH
C403
200V0.12
24828124B
R414
2R27
Q404
2SD2553(FA)
H.OUT
C444
1.8K5100p (23314713)
123.5
R416
5W5.6K
T401
TLN1098AH
H.DRIVE TRANS
C463
1500P
-15.5
-15.4
R429
1/2R33
C443
1.5K6800P
C440
1.5K1000P
D443
RU4AM LF-L1
D444
RU4AM LF-L1
C418
630V0.015μF
820P
C417
VFJ390P
C416
200V10μ
DPC-1
L442
TLN3346AD (RA)
TLN3007 (RB)
L441
TLN2203AG
D448
EU2A
R477
2R120
R441
2R1K
C445
200V0.047μ
NP
GJ07
OPEN
GJ06
SHORT
C423
400V0.62
24082656B
H:700V(p-p)
V:300V(p-p)
L465
TEM2011Y
C467
630V0.015
24082153B
OR
24095883B
D461
ERC20-06
(23316582)
D496
MTZJ5.1A
R499
820
R495
6.8K
R498
15K
R486
OPEN
C486
M0.022
G401
SHORT
D401
MTZJ10B
R496
820
GJ05
SHORT
Q483
TA7508P
R485
1/2R270
R497
SHORT
D483
MTZJ12C
D485
MTZJ15C
C419
0.062
400V
24829623B
Q480
2SC2023LF-4
122.3
1.0
0.6
R434
1K
R492
1K
R431
1R10
H.V. REG. CIRCUIT
R439
4.7K
R453
2R22K
R452
1/2R22K
R451
1/2R22K
R489
3.3K
R450
1KB
R490
3.3K
R494
18K
C482
1500
R487
4.7K
35.0
C483
M0.22
R488
470K
D482 EU2A
C485
50V100μ
R493
1/2R3.9K
R435
33K
D488
1SS133
D489
MTZJ7.5B
R391
R392
1R390
MD01
KAKOU WIRE
Z470 TPA6032BH
AC
DC
GND

9UXE 9UXA 9UXM 9UXR	50N9UXH	50N9UXC	43N9UXC	61N9UXC
045	PB9252	PB9045D	PB9045F	PB9045G

11 12 13 14


(23312747)
EH
V903 BLUE CRT
P16LNU10(BMB)(BA)
(23312782)
⚠ Z410 TPA6031 (23118042)
SCREEN
BLUE CRT
FOCUS
SCREEN
GREEN CRT
FOCUS
SCREEN
RED CRT
FOCUS
TO CRT
E
DF
IN
⚠ Z450
TPA5007
CR BLOCK
IN
EH
EH
EH
C
R
FB
P498
1P
R400
1/2S1K
SHORT C477
2KV 1500p
R479
OPEN
R382
1R220K
P414
2P
T400
TLN2168AH
C403
200V0.12
24828124B
R414
2R27
P401
6P
R390
1R390
R
L461
TDY707AS
P402
6P
R391
1R390
G
L462
TDY707AS
R392
1R390
B
L463
TDY707AS
P403
6P
MD01
KAKOU WIRE
Z470 TPA6032BH
AC
DC
GND
GJ07
OPEN
GJ06
SHORT
86
EN
D401
MTZJ10B
G401
SHORT
R496
820
83
7508P
D482 EU2A
C485
50V100μ
R493
1/2R3.9K
D489
MTZJ7.5B
R435
33K
D488
1SS133
G
H
I
J
K
L
14
15
16

SCHEMATIC DIAGRAM MODEL : 50N9UXE / 50N9UXH (3/6) 50N9UXA / 50N9UXM

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 3. Do not degrade the safety of the receiver through improper servicing.

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position. Set other controls for best picture.

NOTES:

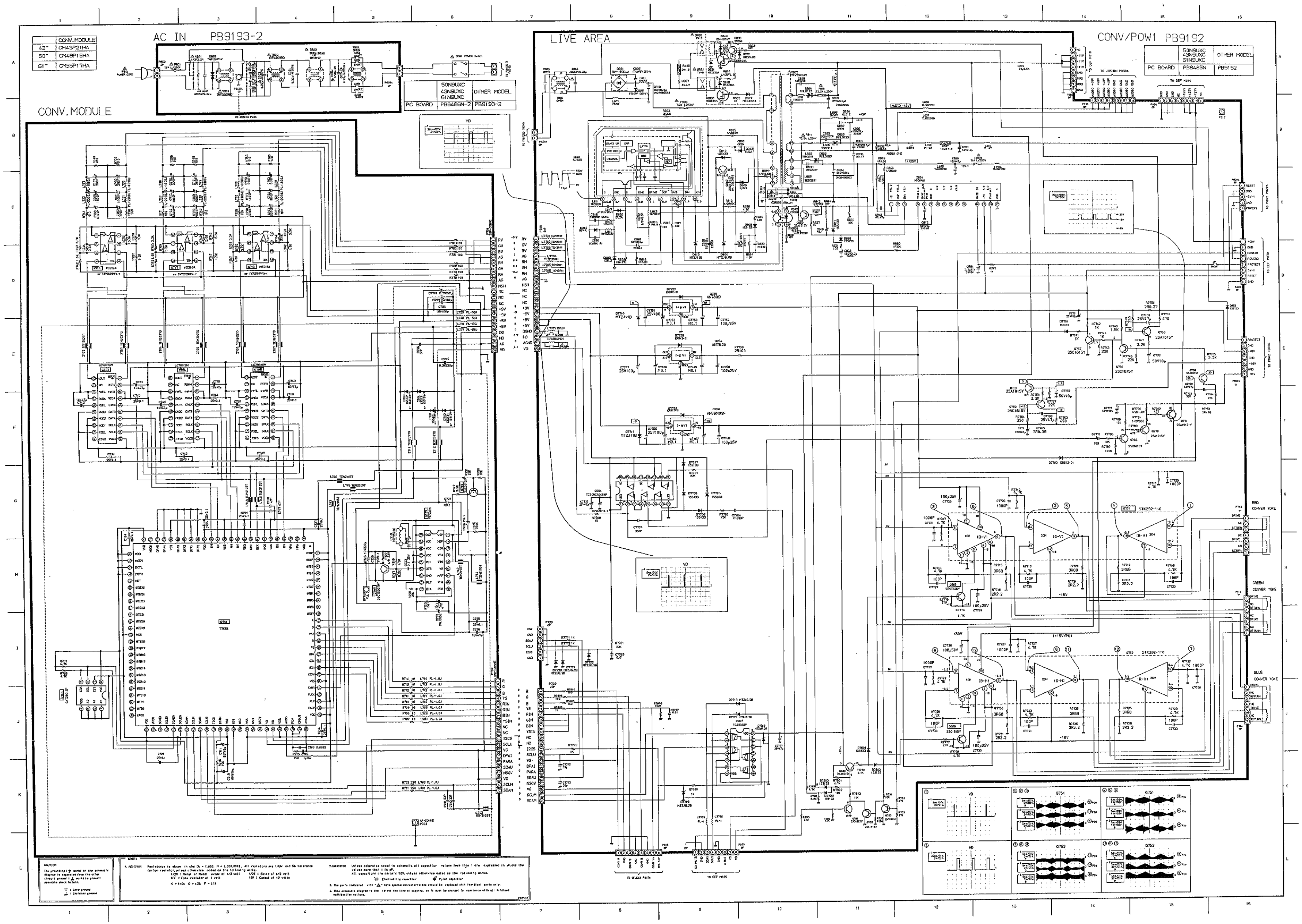
1. D.C. resistance value of a principal transformer is shown in this schematic diagram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH, and the values less than 1 in H.

040-9909



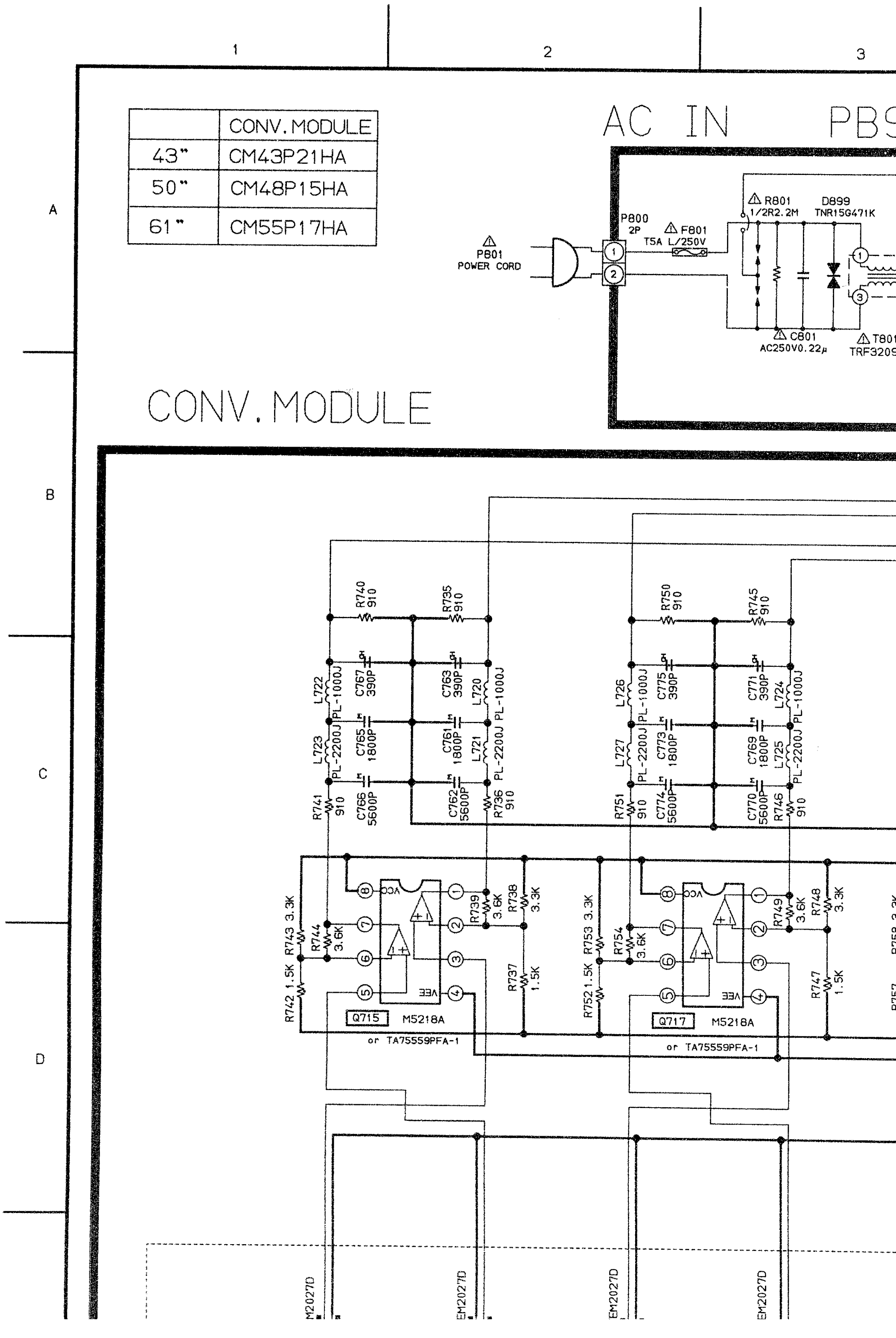
AC IN PB9193-2
CONV.MODULE
43" CM43P21HA
50" CM48P15HA
61" CM55P17HA
50N9UXC 43N9UXC 61N9UXC
OTHER MODEL
PC BOARD PB8486N-2 PB9193-2
LIVE AREA
CONV/POW1 PB9192
PC BOARD PB8485N PB9192
TO DEF M010
TO JUSHIN P030A
TO DEF M050
HD
VD
RED CONVER YOKE
GREEN CONVER YOKE
BLUE CONVER YOKE
Q751
Q752
STK392-110

SCHEMATIC DIAGRAM MODEL : 50N9UXE / 50N9UXH

50N9UXA / 50N9UXM

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on pa 3. Do not degrade the safety of the receiver through improper servicing.

040-9909



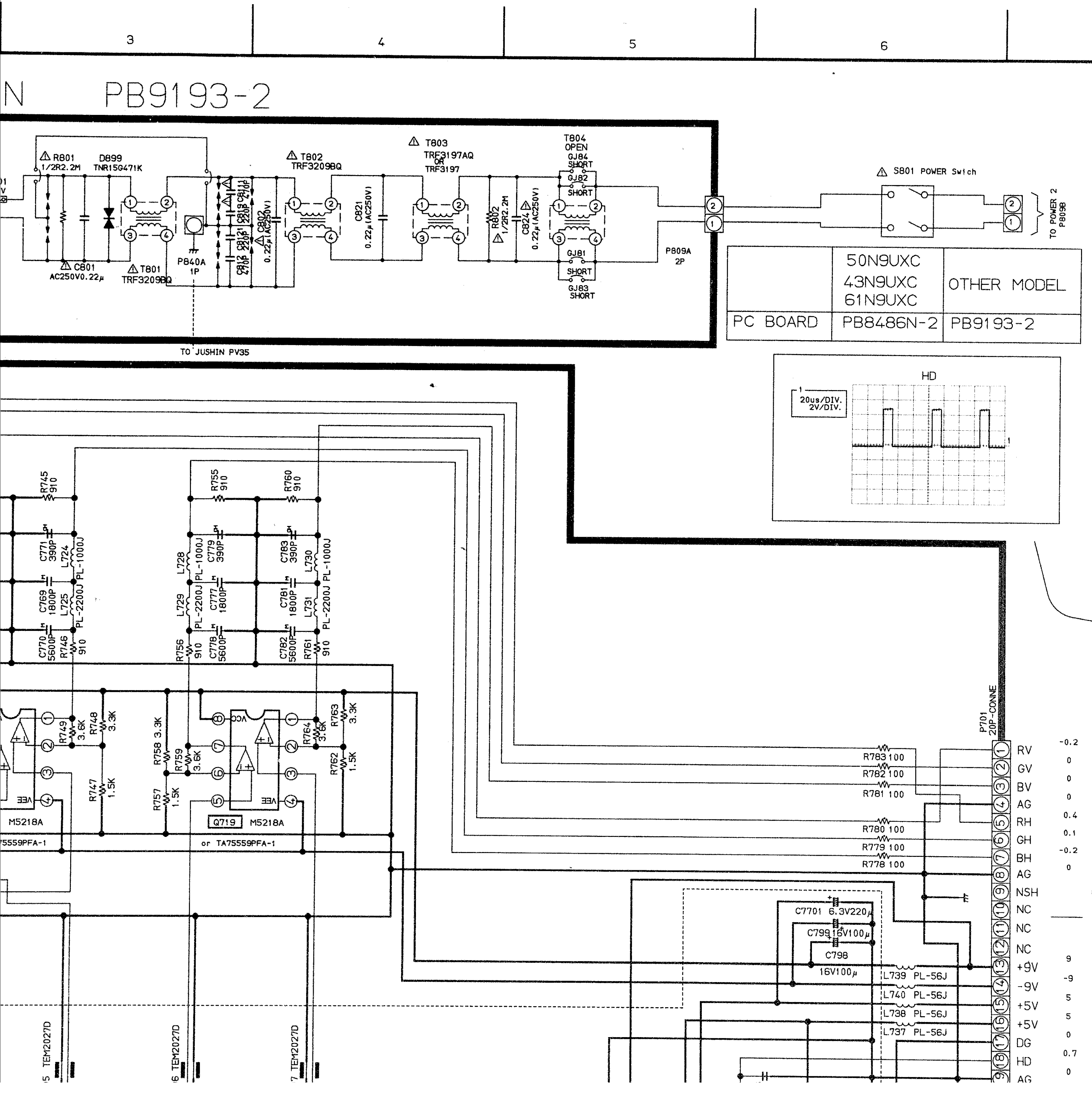
1
2
3
A
B
C
D
CONV. MODULE
43" CM43P21HA
50" CM48P15HA
61" CM55P17HA
AC IN
PB
PB01 POWER CORD
P800 2P
F801 T5A L/250V
R801 1/2R2.2M
D899 TNR15G471K
C801 AC250V0.22μ
T801 TRF3209
CONV. MODULE
R740 910
R735 910
R750 910
R745 910
L722 PL-1000J
C767 390P
C763 390P
L720 PL-1000J
L726 PL-1000J
C775 390P
C771 390P
L724 PL-1000J
L723 PL-2200J
C765 1800P
C761 1800P
L721 PL-2200J
L727 PL-2200J
C773 1800P
C769 1800P
L725 PL-2200J
R741 910
C766 5600P
C762 5600P
R736 910
R751 910
C774 5600P
C770 5600P
R746 910
R743 3.3K
R744 3.6K
R742 1.5K
R739 3.6K
R738 3.3K
R737 1.5K
R753 3.3K
R754 3.6K
R752 1.5K
R749 3.6K
R748 3.3K
R747 1.5K
VCC
VEE
Q715 M5218A or TA75559PFA-1
Q717 M5218A or TA75559PFA-1
EM2027D
EM2027D
EM2027D
EM2027D

0N9UXH (3/6)
0N9UXM

esignate com-
th types identical to
is to be identical
Y NOTICE on page

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position. Set other controls for best picture.



3
4
5
6
N PB9193-2
⚠ R801 1/2R2.2M
D899 TNR15G471K
⚠ C801 AC250V0.22μ
⚠ T801 TRF3209BQ
P840A 1P
C812 470P
C813 220P
C819 220P
C811 470P
C802 0.22μ(AC250V)
TO JUSHIN PV35
⚠ T802 TRF3209BQ
C821 0.22μ(AC250V)
⚠ T803 TRF3197AQ OR TRF3197
⚠ R802 1/2R2.2M
C824 0.22μ(AC250V)
T804 OPEN
GJ84 SHORT
GJ82 SHORT
GJ81 SHORT
GJ83 SHORT
P809A 2P
⚠ S801 POWER Switch
TO POWER 2 P8098
HD
20us/DIV. 2V/DIV.
R745 910
C771 390P
L724 PL-1000J
C769 1800P
L725 PL-2200J
C770 5600P
R746 910
R749 3.6K
R748 3.3K
R747 1.5K
M5218A
TA75559PFA-1
R755 910
R760 910
L728 PL-1000J
C779 390P
L729 PL-2200J
C777 1800P
R756 910
C778 5600P
C783 390P
L730 PL-1000J
C781 1800P
L731 PL-2200J
C782 5600P
R761 910
R758 3.3K
R759 3.6K
R757 1.5K
VCC
VEE
Q719 M5218A
or TA75559PFA-1
R764 3.6K
R763 3.3K
R762 1.5K
TEM2027D
P701 20P-CONNE
R783 100
R782 100
R781 100
R780 100
R779 100
R778 100
C7701 6.3V220μ
C799 16V100μ
C798 16V100μ
L739 PL-56J
L740 PL-56J
L738 PL-56J
L737 PL-56J
① RV -0.2
② GV 0
③ BV 0
④ AG 0
⑤ RH 0.4
⑥ GH 0.1
⑦ BH -0.2
⑧ AG 0
⑨ NSH
⑩ NC
⑪ NC
⑫ NC
⑬ +9V 9
⑭ -9V -9
⑮ +5V 5
⑯ +5V 5
⑰ DG 0
⑱ HD 0.7
⑲ AG 0

	50N9UXC 43N9UXC 61N9UXC	OTHER MODEL
PC BOARD	PB8486N-2	PB9193-2

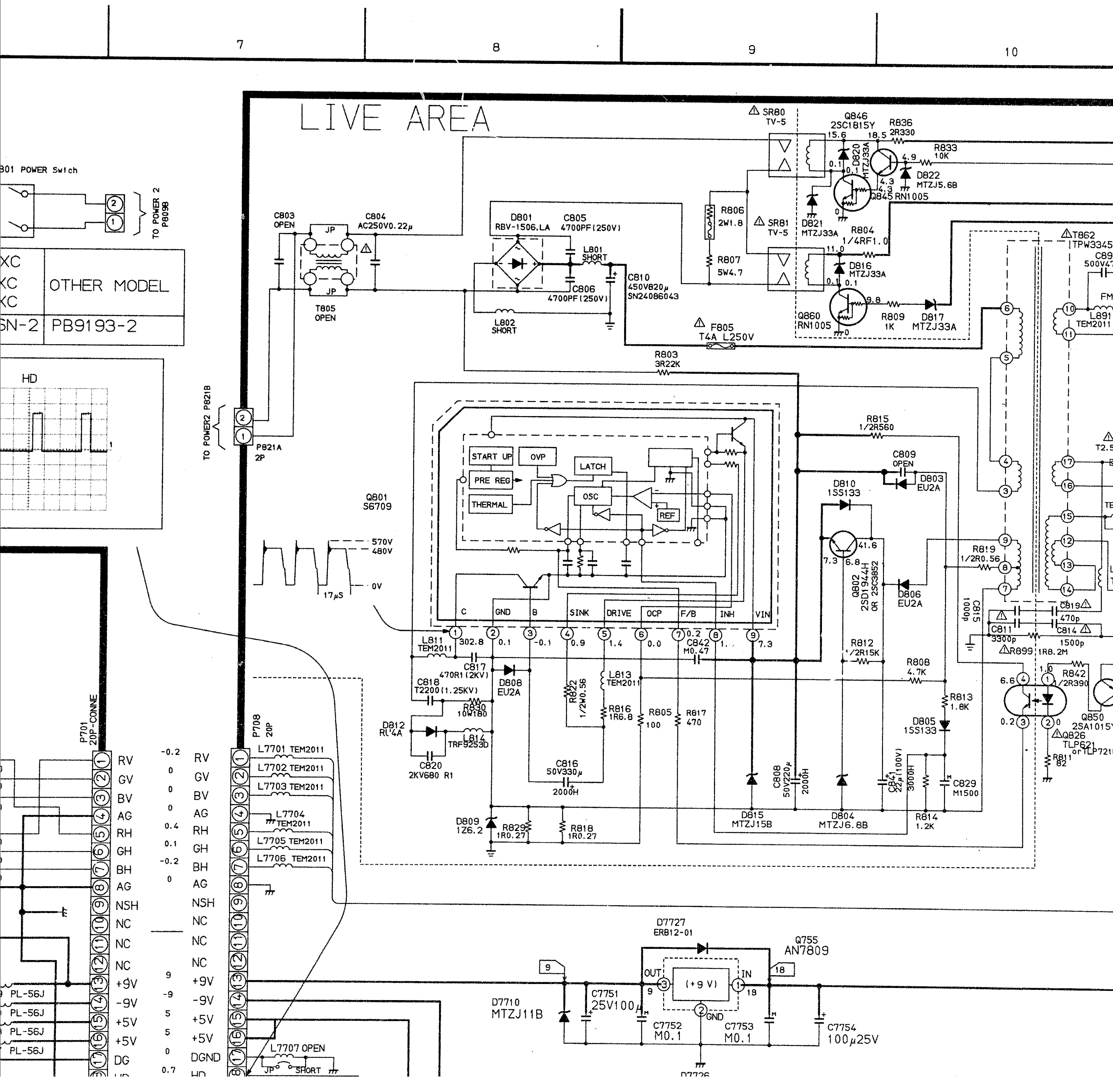
nd, line voltage 220

low capacity probe.

mid position and
er controls for best

NOTES:

1. D.C. resistance value of a principal transformer is shown in this scher gram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.

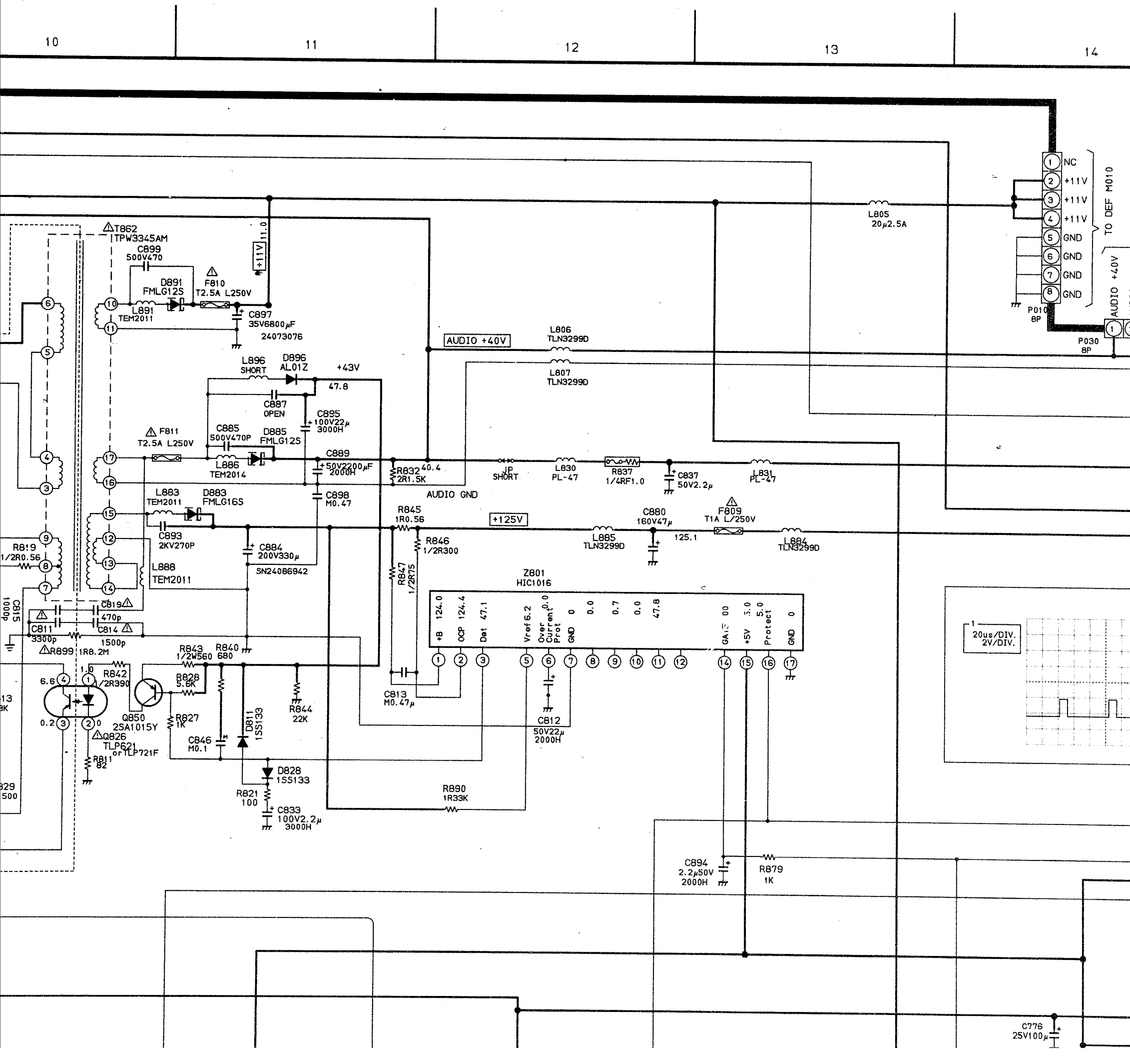

7
8
9
10
LIVE AREA
01 POWER Swich
TO POWER 2 P8098
XC
XC
XC
OTHER MODEL
SN-2
PB9193-2
HD
C803 OPEN
C804 AC250V0.22μ
JP
T805 OPEN
D801 RBV-1506.LA
C805 4700PF(250V)
L801 SHORT
C806 4700PF(250V)
C810 450V820μ SN24086043
L802 SHORT
SR80 TV-5
SR81 TV-5
R806 2W1.8
R807 5W4.7
Q846 2SC1815Y
R836 2R330
R833 10K
D820 MTZJ33A
D822 MTZJ5.6B
Q845 RN1005
D821 MTZJ33A
R804 1/4RF1.0
D816 MTZJ33A
Q860 RN1005
R809 1K
D817 MTZJ33A
F805 T4A L250V
R803 3R22K
T862 TPW3345
TEM2011
FM
TO POWER2 P821B
P821A 2P
Q801 S6709
START UP
OVP
LATCH
PRE REG
OSC
THERMAL
REF
570V
480V
0V
17μS
C
GND
B
SINK
DRIVE
OCP
F/B
INH
VIN
302.8
0.1
-0.1
0.9
1.4
0.0
0.2
7.3
R815 1/2R560
C809 OPEN
D803 EU2A
D810 1SS133
Q802 2SD1944H OR 2SC3852
41.6
6.8
D806 EU2A
R819 1/2R0.56
C815 1000p
C811 3300p
C819 470p
C814 1500p
R899 1R8.2M
R812 1/2R15K
R808 4.7K
R842 1/2R390
R813 1.8K
D805 1SS133
Q850 2SA1015
Q826 TLP621 or TLP721
R811 82
L811 TEM2011
C817 470R1(2KV)
C818 T2200(1.25KV)
D808 EU2A
R830 10W180
R822 1/2W0.56
L813 TEM2011
R816 1R6.8
R805 100
R817 470
C842 M0.47
D812 RU4A
L814 TRF9253D
C820 2KV680 R1
C816 50V330μ
2000H
D809 1Z6.2
R829 1R0.27
R818 1R0.27
D815 MTZJ15B
C808 50V220μ
2000H
D804 MTZJ6.8B
C841 22μ(100V)
3000H
C829 M1500
R814 1.2K
P701 20P-CONNE
P708 20P
RV GV BV AG RH GH BH AG NSH NC NC NC +9V -9V +5V +5V DG
-0.2 0 0 0 0.4 0.1 -0.2 0 9 -9 5 5 0 0.7
RV GV BV AG RH GH BH AG NSH NC NC NC +9V -9V +5V +5V DGND HD
L7701 TEM2011
L7702 TEM2011
L7703 TEM2011
L7704 TEM2011
L7705 TEM2011
L7706 TEM2011
L7707 OPEN
JP SHORT
PL-56J
D7727 ERB12-01
Q755 AN7809
OUT IN GND (+9 V)
9 18
D7710 MTZJ11B
C7751 25V100μ
C7752 M0.1
C7753 M0.1
C7754 100μ25V
D7726

wn in this schematic dia-
it.

EXPRESSION

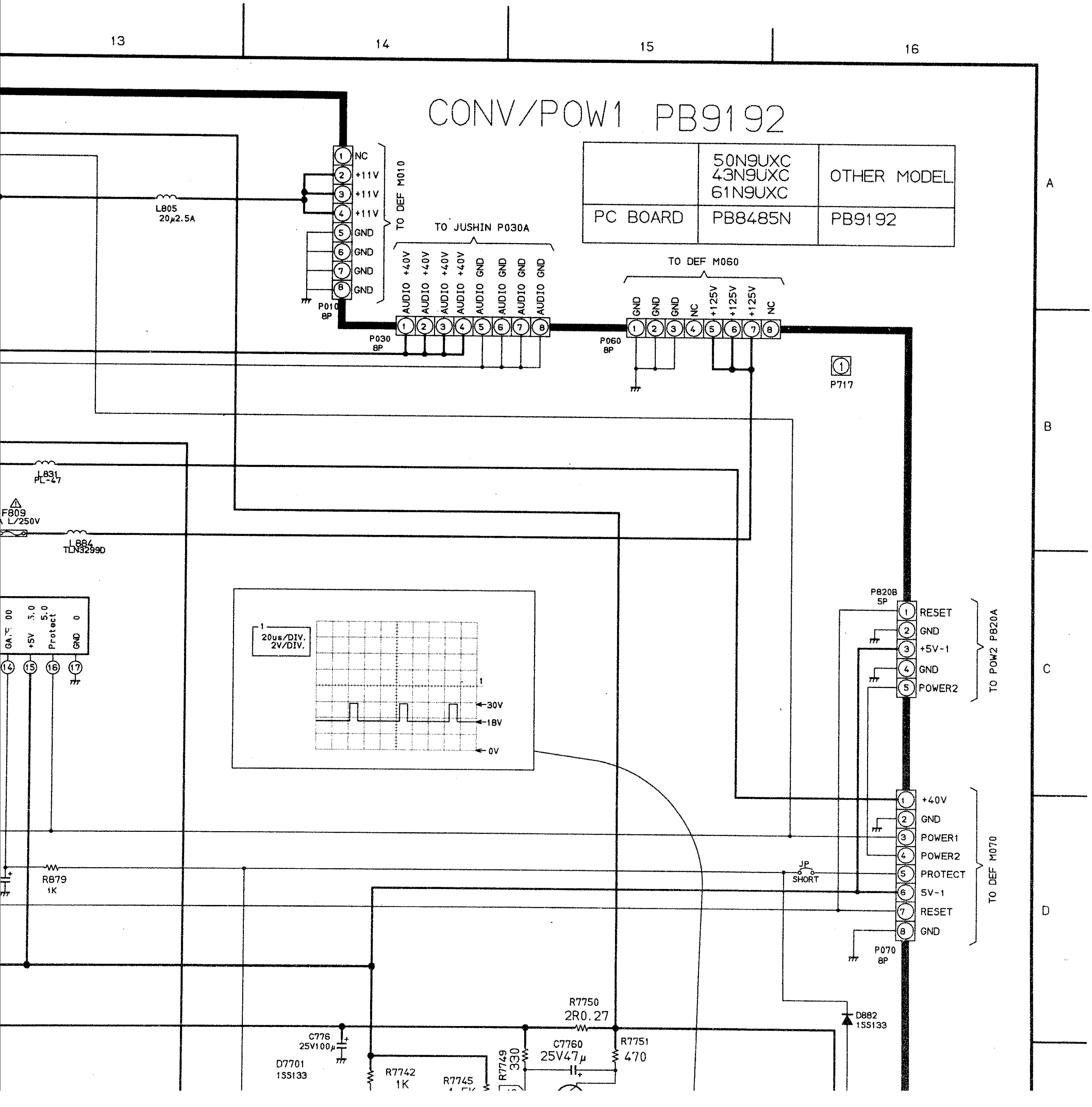
VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less thar
   sed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more thar
   sed in μH, and the values less than 1 in H.


10
11
12
13
14
T862
TPW3345AM
C899
500V470
D891
FMLG12S
F810
T2.5A L250V
L891
TEM2011
C897
35V6800μF
24073076
+11V
11.0
L896
SHORT
D896
AL01Z
+43V
47.8
C887
OPEN
C895
100V22μ
3000H
F811
T2.5A L250V
C885
500V470P
D885
FMLG12S
L886
TEM2014
C889
50V2200μF
2000H
R832
2R1.5K
40.4
C898
M0.47
L883
TEM2011
D883
FMLG16S
C893
2KV270P
C884
200V330μ
SN24086942
L888
TEM2011
R819
1/2R0.56
C815
1000p
C819
470p
C811
3300p
C814
1500p
R899
1R8.2M
R843
1/2W560
R840
680
R842
1/2R390
R828
5.6K
Q850
2SA1015Y
R827
1K
Q826
TLP621
or TLP721F
R811
82
C846
M0.1
D811
1SS133
R844
22K
D828
1SS133
R821
100
C833
100V2.2μ
3000H
6.6
0.2
AUDIO +40V
AUDIO GND
L806
TLN3299D
L807
TLN3299D
JP
SHORT
L830
PL-47
R837
1/4RF1.0
C837
50V2.2μ
L831
PL-47
R845
1R0.56
R846
1/2R300
R847
1/2R75
+125V
L885
TLN3299D
C880
160V47μ
125.1
F809
T1A L/250V
L884
TLN3299D
Z801
HIC1016
124.0
124.4
47.1
6.2
0.0
0
0.0
0.7
0.0
47.8
00
5.0
5.0
0
+B
OCP
Det
Vref
Over Current Prot
GND
GATE
+5V
Protect
GND
C813
M0.47μ
C812
50V22μ
2000H
R890
1R33K
C894
2.2μ50V
2000H
R879
1K
L805
20μ2.5A
NC
+11V
+11V
+11V
GND
GND
GND
GND
TO DEF M010
P010
8P
AUDIO +40V
P030
8P
20us/DIV.
2V/DIV.
C776
25V100μ

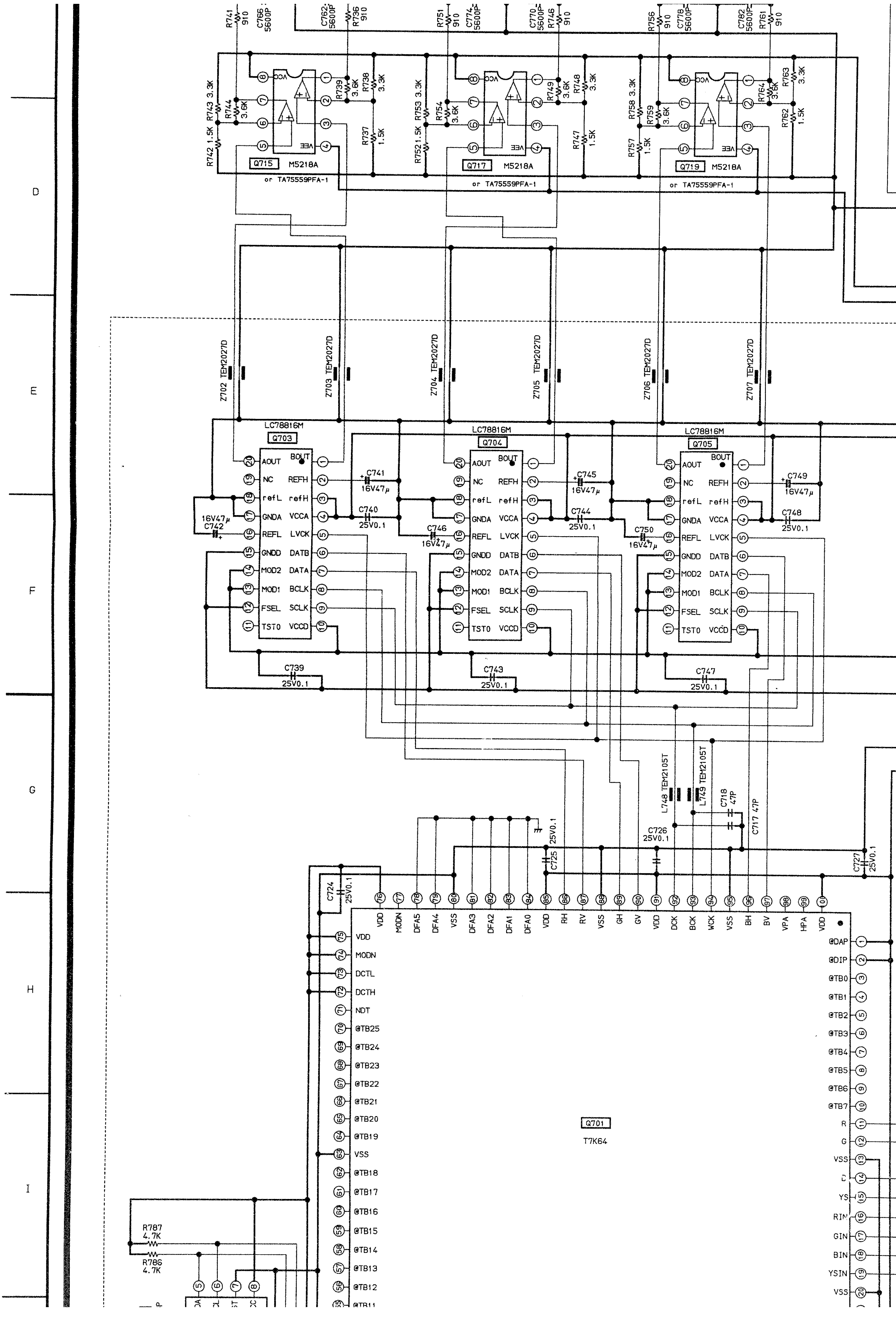
CAPACITOR and INDUCTOR

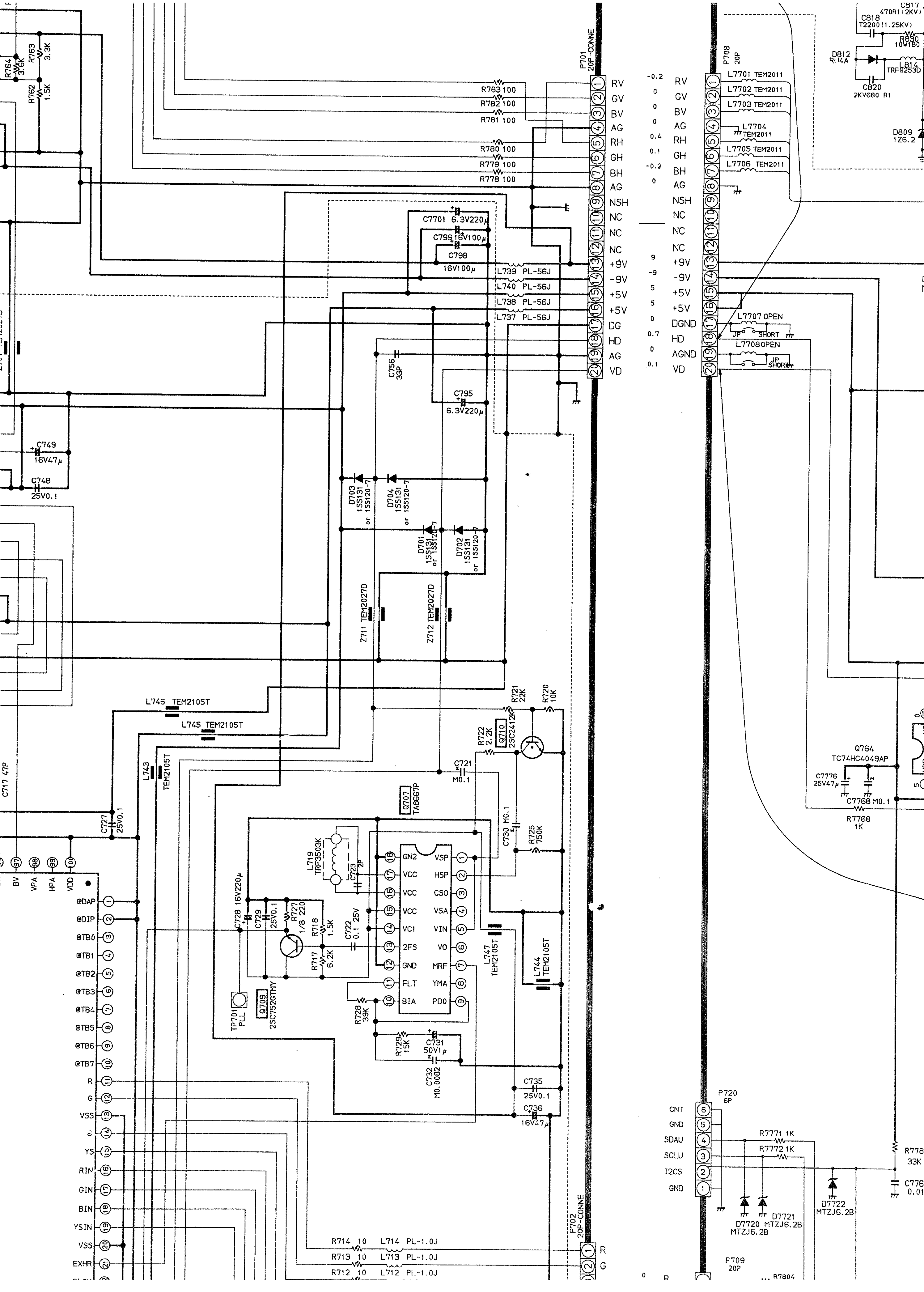
hm, k=1,000, M=1,000,000
in schematic, all capacitor values less than 1 are expres-
more than 1 in pF.
in schematic, all inductor values more than 1 are expres-
s less than 1 in H.

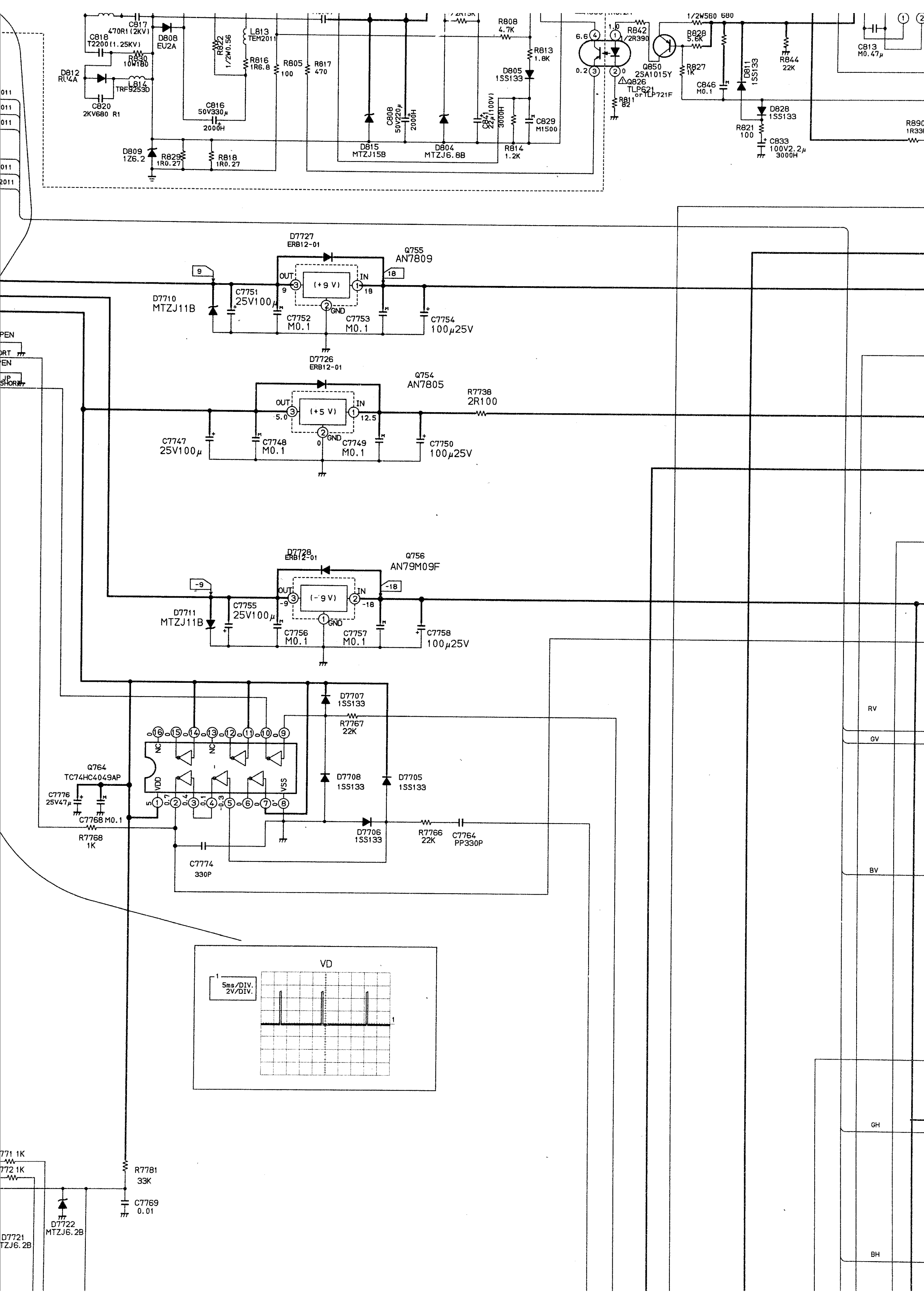


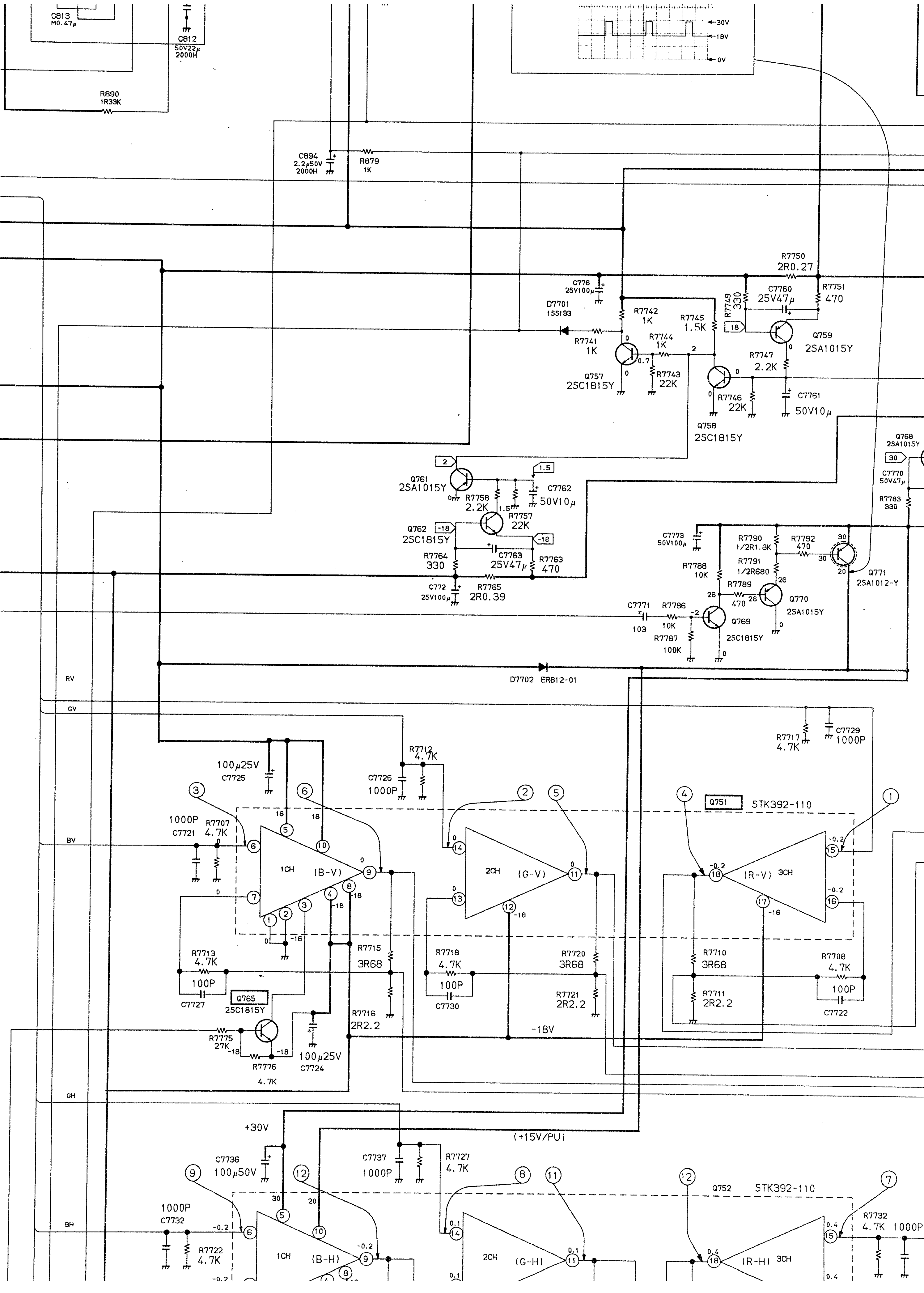
	50N9UXC 43N9UXC 61N9UXC	OTHER MODEL
PC BOARD	PB8485N	PB9192

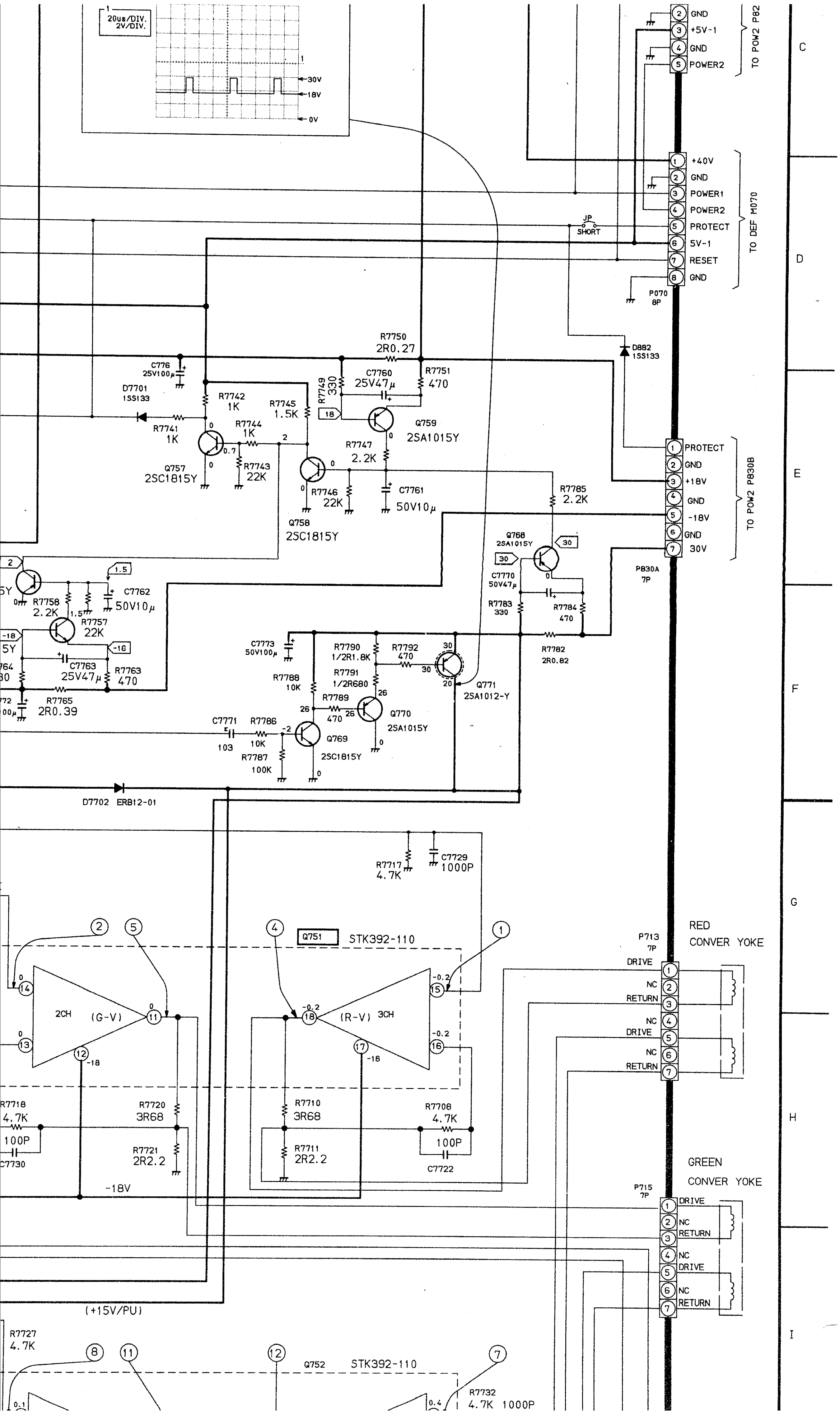
13
14
15
16
A
B
C
D
CONV/POW1 PB9192
NC
+11V
+11V
+11V
GND
GND
GND
GND
TO DEF M010
P010
8P
L805
20μ2.5A
TO JUSHIN P030A
AUDIO +40V
AUDIO +40V
AUDIO +40V
AUDIO +40V
AUDIO GND
AUDIO GND
AUDIO GND
AUDIO GND
P030
8P
TO DEF M060
GND
GND
GND
NC
+125V
+125V
+125V
NC
P060
8P
P717
L831
PL-47
F809
L/250V
L884
TLN3299D
GATE
+5V
Protect
GND
0
5.0
5.0
0
20us/DIV.
2V/DIV.
1
30V
18V
0V
P820B
5P
RESET
GND
+5V-1
GND
POWER2
TO POW2 P820A
+40V
GND
POWER1
POWER2
PROTECT
5V-1
RESET
GND
TO DEF M070
P070
8P
JP
SHORT
R879
1K
D882
1SS133
R7750
2R0.27
R7751
470
C7760
25V47μ
R7749
330
C776
25V100μ
D7701
1SS133
R7742
1K
R7745


D
E
F
G
H
I
R741 910
C766 5600P
C762 5600P
R736 910
R751 910
C774 5600P
C770 5600P
R746 910
R756 910
C778 5600P
C782 5600P
R761 910
R743 3.3K
R744 3.6K
R742 1.5K
R739 3.6K
R738 3.3K
R737 1.5K
Q715 M5218A
or TA75559PFA-1
R753 3.3K
R754 3.6K
R752 1.5K
R749 3.6K
R748 3.3K
R747 1.5K
Q717 M5218A
or TA75559PFA-1
R758 3.3K
R759 3.6K
R757 1.5K
R764 3.6K
R763 3.3K
R762 1.5K
Q719 M5218A
or TA75559PFA-1
VCC
VEE
Z702 TEM2027D
Z703 TEM2027D
Z704 TEM2027D
Z705 TEM2027D
Z706 TEM2027D
Z707 TEM2027D
LC78816M
Q703
LC78816M
Q704
LC78816M
Q705
AOUT
BOUT
NC
REFH
refL
refH
GNDA
VCCA
REFL
LVCK
GNDD
DATB
MOD2
DATA
MOD1
BCLK
FSEL
SCLK
TSTO
VCCD
C741 16V47μ
C740 25V0.1
C742 16V47μ
C745 16V47μ
C744 25V0.1
C746 16V47μ
C749 16V47μ
C748 25V0.1
C750 16V47μ
C739 25V0.1
C743 25V0.1
C747 25V0.1
L748 TEM2105T
L749 TEM2105T
C718 47P
C717 47P
C726 25V0.1
C725 25V0.1
C724 25V0.1
C727 25V0.1
Q701
T7K64
VDD
MODN
DFA5
DFA4
VSS
DFA3
DFA2
DFA1
DFA0
RH
RV
GH
GV
DCK
BCK
WCK
BH
BV
VPA
HPA
DCTL
DCTH
NDT
@TB25
@TB24
@TB23
@TB22
@TB21
@TB20
@TB19
@TB18
@TB17
@TB16
@TB15
@TB14
@TB13
@TB12
@TB11
@DAP
@DIP
@TB0
@TB1
@TB2
@TB3
@TB4
@TB5
@TB6
@TB7
R
G
YS
RIN
GIN
BIN
YSIN
R787 4.7K
R786 4.7K

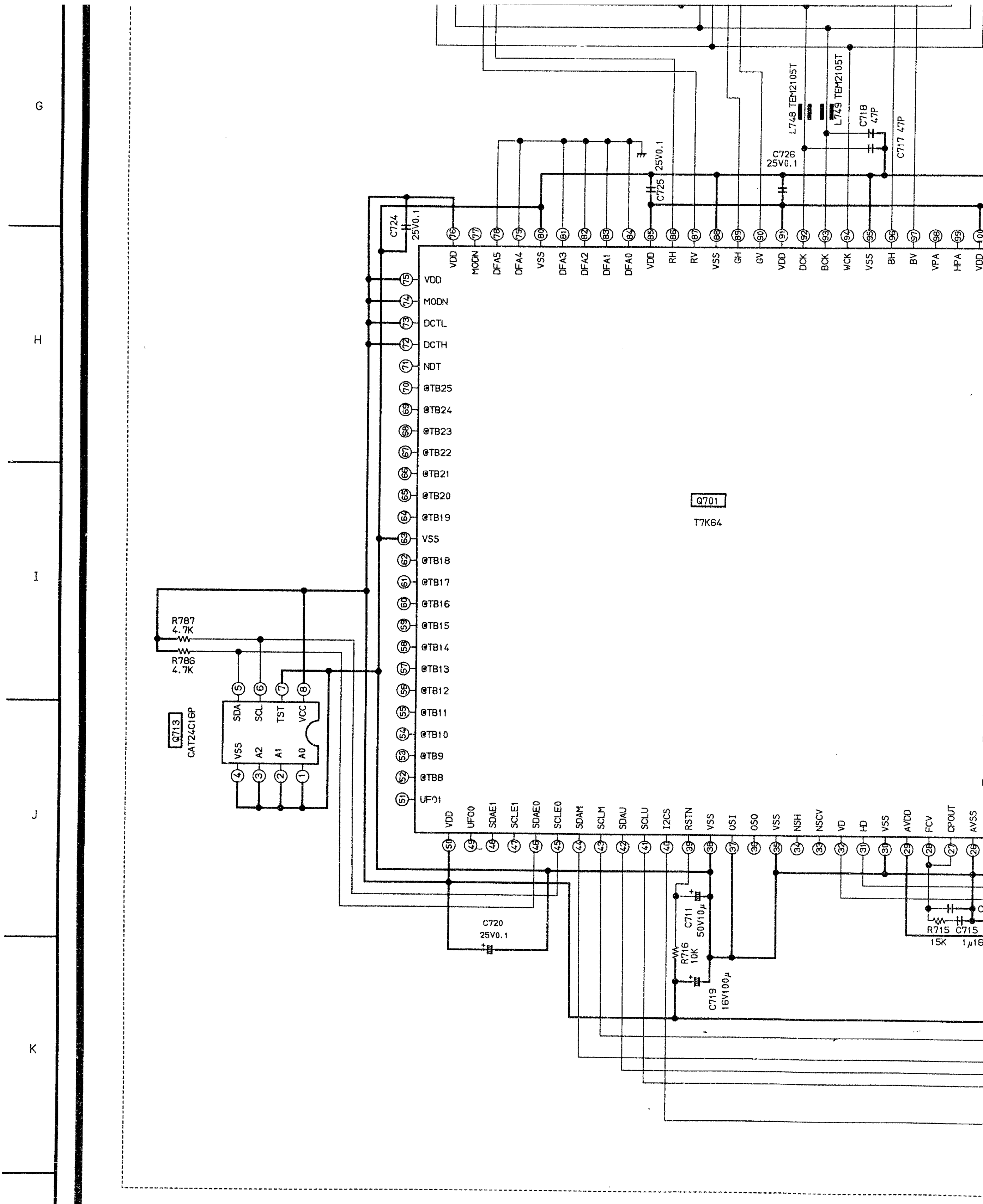

R764 3.6K
R763 3.3K
R762 1.5K
P701 20P-CONNE
R783 100
R782 100
R781 100
R780 100
R779 100
R778 100
RV
GV
BV
AG
RH
GH
BH
AG
NSH
NC
NC
NC
+9V
-9V
+5V
+5V
DG
HD
AG
VD
-0.2
0
0
0
0.4
0.1
-0.2
0
9
-9
5
5
0
0.7
0
0.1
C7701 6.3V220μ
C799 16V100μ
C798 16V100μ
L739 PL-56J
L740 PL-56J
L738 PL-56J
L737 PL-56J
C756 33P
C795 6.3V220μ
C749 16V47μ
C748 25V0.1
D703 1SS131 or 1SS120-7
D704 1SS131 or 1SS120-7
D701 1SS131 or 1SS120-7
D702 1SS131 or 1SS120-7
Z711 TEM2027D
Z712 TEM2027D
L746 TEM2105T
L745 TEM2105T
L743 TEM2105T
C717 47P
C727 25V0.1
R721 22K
R720 10K
R722 2.2K
Q710 2SC2412K
C721 M0.1
Q707 TA8667P
C730 M0.1
R725 750K
L719 TRF3503K
C723 2P
C728 16V220μ
C729 25V0.1
R727 1/8 220
R718 1.5K
C722 0.1 25V
R717 6.2K
TP701 PLL
Q709 2SC752GTMY
GN2
VCC
VCC
VCC
VC1
2FS
GND
FLT
BIA
VSP
HSP
CSO
VSA
VIN
VO
MRF
YMA
PDO
R728 39K
R729 15K
C731 50V1μ
C732 M0.0082
L747 TEM2105T
L744 TEM2105T
C735 25V0.1
C736 16V47μ
BV
VPA
HPA
VDD
97
98
99
100
@DAP
@DIP
@TB0
@TB1
@TB2
@TB3
@TB4
@TB5
@TB6
@TB7
R
G
VSS
YS
RIN
GIN
BIN
YSIN
VSS
EXHR
P702 20P-CONNE
R714 10
R713 10
R712 10
L714 PL-1.0J
L713 PL-1.0J
L712 PL-1.0J
R
G
P708 20P
L7701 TEM2011
L7702 TEM2011
L7703 TEM2011
L7704 TEM2011
L7705 TEM2011
L7706 TEM2011
RV
GV
BV
AG
RH
GH
BH
AG
NSH
NC
NC
NC
+9V
-9V
+5V
+5V
DGND
HD
AGND
VD
L7707 OPEN
JP SHORT
L7708 OPEN
JP SHORT
C817 470R1(2KV)
C818 T2200(1.25KV)
R830 10W180
D812 RU4A
L814 TRF5253D
C820 2KV680 R1
D809 1Z6.2
Q764 TC74HC4049AP
C7776 25V47μ
C7768 M0.1
R7768 1K
P720 6P
CNT
GND
SDAU
SCLU
I2CS
GND
R7771 1K
R7772 1K
D7722 MTZJ6.2B
D7720 MTZJ6.2B
D7721 MTZJ6.2B
R778 33K
C776 0.01
P709 20P
R7804
0
R


C817
470R1(2KV)
C818
T2200(1.25KV)
D808
EU2A
R830
10W180
D812
RU4A
L814
TRF9253D
C820
2KV680 R1
R822
1/2W0.56
L813
TEM2011
R816
1R6.8
R805
100
R817
470
C816
50V330μ
2000H
D809
1Z6.2
R829
1R0.27
R818
1R0.27
D815
MTZJ15B
C808
50V220μ
2000H
D804
MTZJ6.8B
C841
22μ(100V)
3000H
R808
4.7K
R813
1.8K
D805
1SS133
C829
M1500
R814
1.2K
6.6
0.2
1.0
0
R842
1/2R390
Q826
TLP621
or TLP721F
R811
82
Q850
2SA1015Y
1/2W560
680
R828
5.6K
R827
1K
C846
M0.1
D811
1SS133
D828
1SS133
R821
100
C833
100V2.2μ
3000H
R844
22K
C813
M0.47μ
R890
1R33
011
011
011
011
2011
D7727
ERB12-01
Q755
AN7809
9
18
OUT
IN
(+9 V)
GND
D7710
MTZJ11B
C7751
25V100μ
C7752
M0.1
C7753
M0.1
C7754
100μ25V
PEN
ORT
PEN
JP
SHORT
D7726
ERB12-01
Q754
AN7805
OUT
IN
(+5 V)
GND
5.0
12.5
0
R7738
2R100
C7747
25V100μ
C7748
M0.1
C7749
M0.1
C7750
100μ25V
D7728
ERB12-01
Q756
AN79M09F
-9
-18
OUT
IN
(-9 V)
GND
D7711
MTZJ11B
C7755
25V100μ
C7756
M0.1
C7757
M0.1
C7758
100μ25V
Q764
TC74HC4049AP
NC
NC
VDD
VSS
C7776
25V47μ
C7768 M0.1
R7768
1K
D7707
1SS133
R7767
22K
D7708
1SS133
D7705
1SS133
D7706
1SS133
R7766
22K
C7764
PP330P
C7774
330P
VD
5ms/DIV.
2V/DIV.
771 1K
772 1K
R7781
33K
C7769
0.01
D7722
MTZJ6.2B
D7721
TZJ6.2B
RV
GV
BV
GH
BH


C813
M0.47μ
C812
50V22μ
2000H
R890
1R33K
-30V
-18V
-0V
C894
2.2μ50V
2000H
R879
1K
R7750
2R0.27
C776
25V100μ
R7749
330
C7760
25V47μ
R7751
470
D7701
1SS133
R7742
1K
R7745
1.5K
18
Q759
2SA1015Y
R7741
1K
R7744
1K
0.7
2
R7743
22K
R7747
2.2K
Q757
2SC1815Y
R7746
22K
C7761
50V10μ
Q758
2SC1815Y
Q768
2SA1015Y
30
C7770
50V47μ
R7783
330
2
1.5
Q761
2SA1015Y
R7758
2.2K
C7762
50V10μ
R7757
22K
Q762
2SC1815Y
-18
-18
C7763
25V47μ
R7764
330
R7763
470
C772
25V100μ
R7765
2R0.39
C7773
50V100μ
R7790
1/2R1.8K
R7792
470
R7791
1/2R680
R7788
10K
R7789
470
26
Q770
2SA1015Y
Q771
2SA1012-Y
C7771
103
R7786
10K
-2
Q769
2SC1815Y
R7787
100K
D7702 ERB12-01
RV
GV
R7717
4.7K
C7729
1000P
R7712
4.7K
100μ25V
C7725
C7726
1000P
③
⑥
②
⑤
④
Q751
STK392-110
①
1000P
C7721
R7707
4.7K
BV
1CH
(B-V)
2CH
(G-V)
(R-V)
3CH
R7715
3R68
R7718
4.7K
R7720
3R68
R7710
3R68
R7708
4.7K
R7713
4.7K
100P
C7727
C7730
R7721
2R2.2
R7711
2R2.2
100P
C7722
Q765
2SC1815Y
R7716
2R2.2
-18V
R7775
27K
R7776
4.7K
100μ25V
C7724
GH
+30V
(+15V/PU)
C7736
100μ50V
C7737
1000P
R7727
4.7K
⑨
⑫
⑧
⑪
⑫
Q752
STK392-110
⑦
R7732
4.7K
1000P
1000P
C7732
BH
R7722
4.7K
1CH
(B-H)
2CH
(G-H)
(R-H)
3CH



20us/DIV.
2V/DIV.
30V
18V
0V
GND
+5V-1
GND
POWER2
TO POW2 P82
+40V
GND
POWER1
POWER2
PROTECT
5V-1
RESET
GND
TO DEF M070
JP SHORT
P070 8P
D882 1SS133
R7750 2R0.27
C776 25V100μ
D7701 1SS133
R7742 1K
R7745 1.5K
R7749 330
C7760 25V47μ
R7751 470
R7741 1K
R7744 1K
R7743 22K
Q757 2SC1815Y
Q759 2SA1015Y
R7747 2.2K
R7746 22K
C7761 50V10μ
Q758 2SC1815Y
R7785 2.2K
PROTECT
GND
+18V
GND
-18V
GND
30V
TO POW2 P830B
P830A 7P
Q768 2SA1015Y
C7770 50V47μ
R7783 330
R7784 470
R7782 2R0.82
C7762 50V10μ
R7758 2.2K
R7757 22K
C7763 25V47μ
R7763 470
R7765 2R0.39
C7773 50V100μ
R7790 1/2R1.8K
R7792 470
R7791 1/2R680
R7788 10K
R7789 470
Q770 2SA1015Y
Q771 2SA1012-Y
C7771 103
R7786 10K
R7787 100K
Q769 2SC1815Y
D7702 ERB12-01
R7717 4.7K
C7729 1000P
Q751
STK392-110
2CH
(G-V)
(R-V)
3CH
R7718 4.7K
100P
C7730
R7720 3R68
R7721 2R2.2
-18V
R7710 3R68
R7711 2R2.2
R7708 4.7K
100P
C7722
P713 7P
RED CONVER YOKE
DRIVE
NC
RETURN
NC
DRIVE
NC
RETURN
P715 7P
GREEN CONVER YOKE
DRIVE
NC
RETURN
NC
DRIVE
NC
RETURN
(+15V/PU)
R7727 4.7K
Q752
STK392-110
R7732 4.7K 1000P
C
D
E
F
G
H
I


G
H
I
J
K
L748 TEM2105T
L749 TEM2105T
C718
47P
C717 47P
C726
25V0.1
C725
25V0.1
C724
25V0.1
VDD
MODN
DFA5
DFA4
VSS
DFA3
DFA2
DFA1
DFA0
VDD
RH
RV
VSS
GH
GV
VDD
DCK
BCK
WCK
VSS
BH
BV
VPA
HPA
VDD
MODN
DCTL
DCTH
NDT
@TB25
@TB24
@TB23
@TB22
@TB21
@TB20
@TB19
VSS
@TB18
@TB17
@TB16
@TB15
@TB14
@TB13
@TB12
@TB11
@TB10
@TB9
@TB8
UF01
Q701
T7K64
UF00
SDAE1
SCLE1
SDAE0
SCLE0
SDAM
SCLM
SDAU
SCLU
I2CS
RSTN
USI
OSO
NSH
NSCV
VD
HD
AVDD
FCV
CPOUT
AVSS
R787
4.7K
R786
4.7K
Q713
CAT24C16P
SDA
SCL
TST
VCC
A2
A1
A0
C720
25V0.1
C711
50V10μ
R716
10K
C719
16V100μ
R715
15K
C715
1μ16

L

CAUTION

The grounding (⏚ mark) in the schematic diagram is separated from the other circuit ground (⏚ mark) to prevent possible shock hazard.

⏚ : Live ground
⏚ : Isolated ground

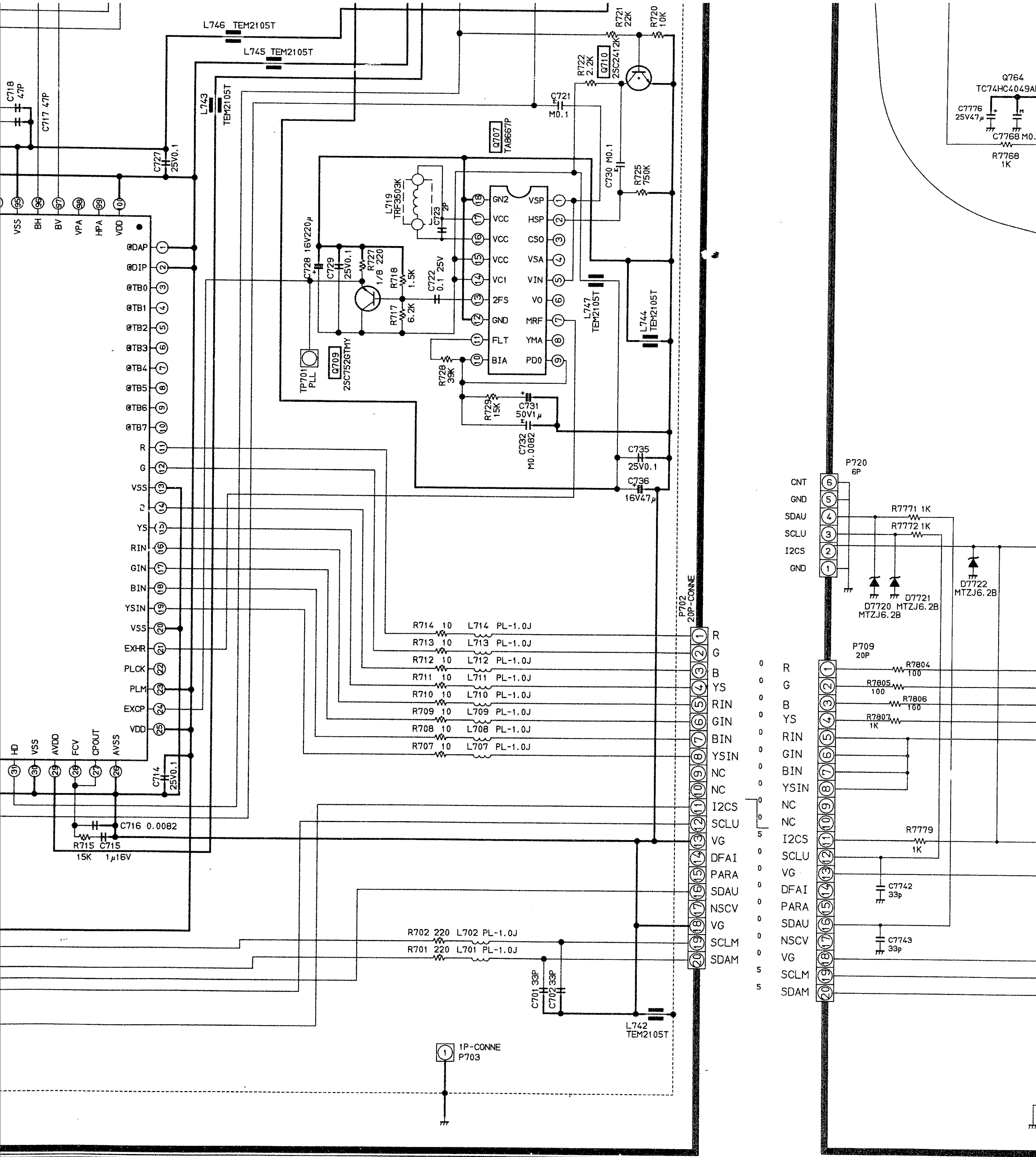
NOTE:

1. RESISTOR Resistance is shown in ohm [k = 1,000. M = 1,000,000]. All resistors sre 1/6W and 5% toleranc
carbon resistor,unless otherwise noted as the following marks.

1/2R : Metal or Metal oxide of 1/2 watt
1RF : Fuse resistor of 1 watt
1/2S : Solid of 1/2 watt
10W : Cement of 10 watts

K = ±10% G = ±2% F = ±1%

1 2 3 4


L746 TEM2105T
L745 TEM2105T
L743 TEM2105T
C718 47P
C717 47P
C727 25V0.1
R721 22K
R720 10K
R722 2.2K
Q710 2SC2412K
C721 M0.1
Q707 TA8667P
C730 M0.1
R725 750K
L719 TRF3503K
C723 2P
C728 16V220μ
C729 25V0.1
R727 1/8 220
R718 1.5K
C722 0.1 25V
R717 6.2K
Q709 2SC752GTMY
TP701 PLL
R728 39K
R729 15K
C731 50V1μ
C732 M0.0082
L747 TEM2105T
L744 TEM2105T
GN2
VCC
VCC
VCC
VC1
2FS
GND
FLT
BIA
VSP
HSP
CSO
VSA
VIN
VO
MRF
YMA
PDO
VSS
BH
BV
VPA
HPA
VDD
@DAP
@DIP
@TB0
@TB1
@TB2
@TB3
@TB4
@TB5
@TB6
@TB7
R
G
VSS
YS
RIN
GIN
BIN
YSIN
VSS
EXHR
PLCK
PLM
EXCP
VDD
HD
VSS
AVDD
FCV
CPOUT
AVSS
C714 25V0.1
C716 0.0082
R715 15K
C715 1μ16V
C735 25V0.1
C736 16V47μ
P702 20P-CONNE
R714 10 L714 PL-1.0J
R713 10 L713 PL-1.0J
R712 10 L712 PL-1.0J
R711 10 L711 PL-1.0J
R710 10 L710 PL-1.0J
R709 10 L709 PL-1.0J
R708 10 L708 PL-1.0J
R707 10 L707 PL-1.0J
R702 220 L702 PL-1.0J
R701 220 L701 PL-1.0J
C701 33P
C702 33P
L742 TEM2105T
1P-CONNE P703
R
G
B
YS
RIN
GIN
BIN
YSIN
NC
NC
I2CS
SCLU
VG
DFAI
PARA
SDAU
NSCV
VG
SCLM
SDAM
Q764 TC74HC4049AP
C7776 25V47μ
C7768 M0.
R7768 1K
P720 6P
CNT
GND
SDAU
SCLU
I2CS
GND
R7771 1K
R7772 1K
D7722 MTZJ6.2B
D7720 MTZJ6.2B
D7721 MTZJ6.2B
P709 20P
R7804 100
R7805 100
R7806 100
R7807 1K
R7779 1K
C7742 33p
C7743 33p

e 1/6W and 5% tolerance

of 1/2 watt
of 10 watts

2.CAPACITOR Unless otherwise noted in schematic.all capacitor valuse less than 1 are expressed in μF.and the values more than 1 in pF.
All capacitors are ceramic 50V. unless otherwise noted as the following marks.

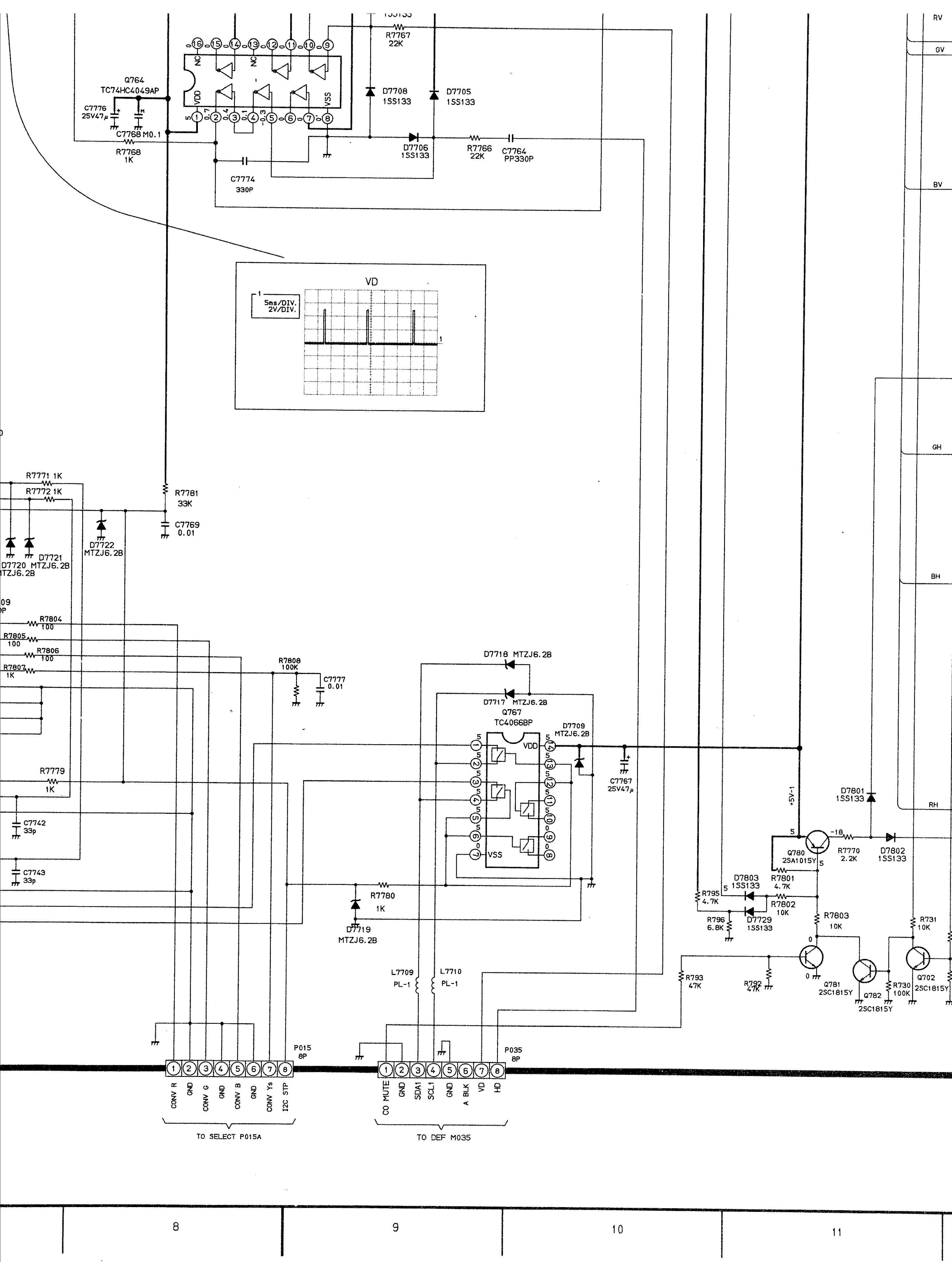
Electrolitic capacitor   Mylar capacitor

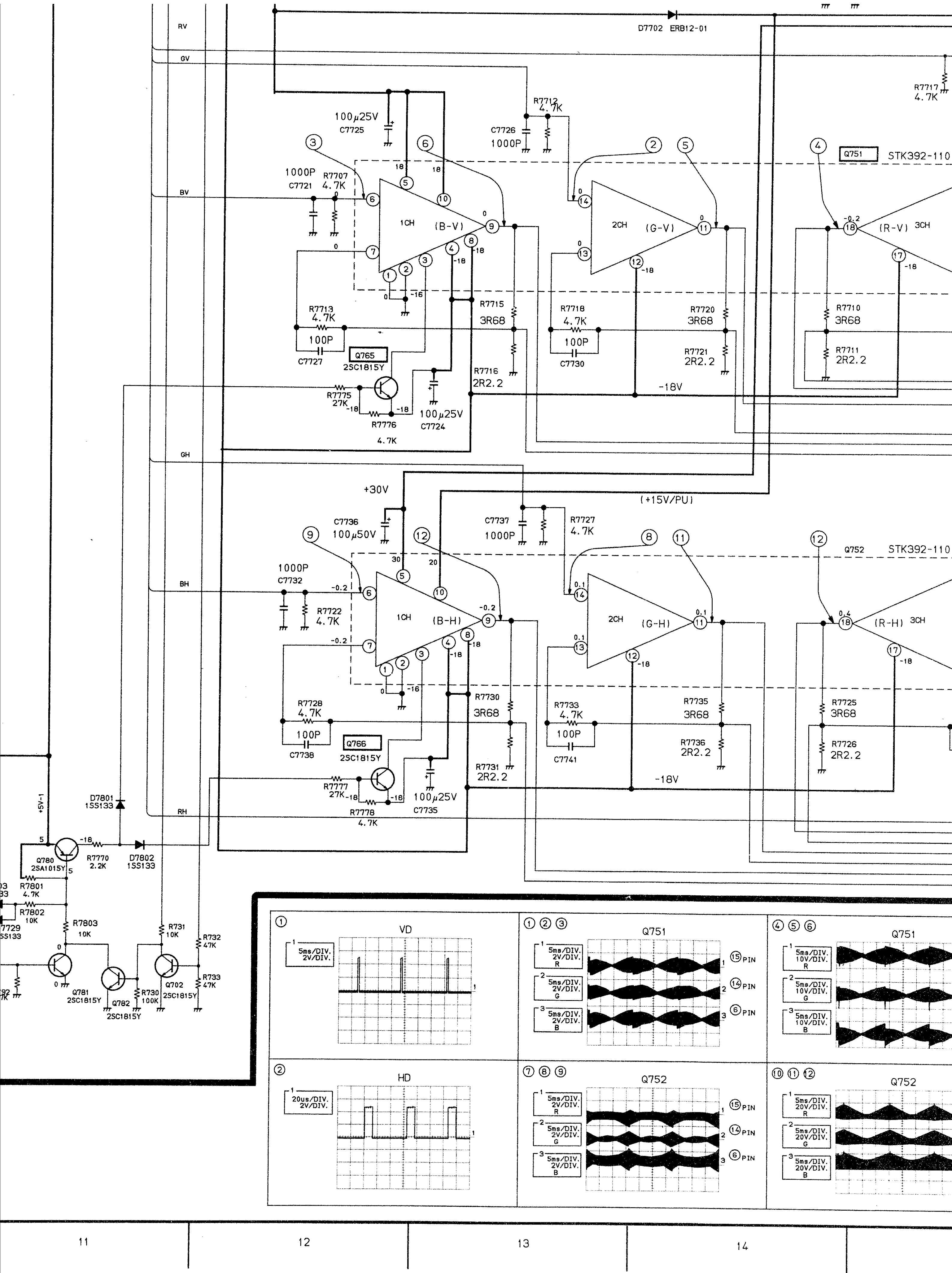
3. The parts indicated with "⚠" have specialcharacteristics should be replaced with identical parts only.

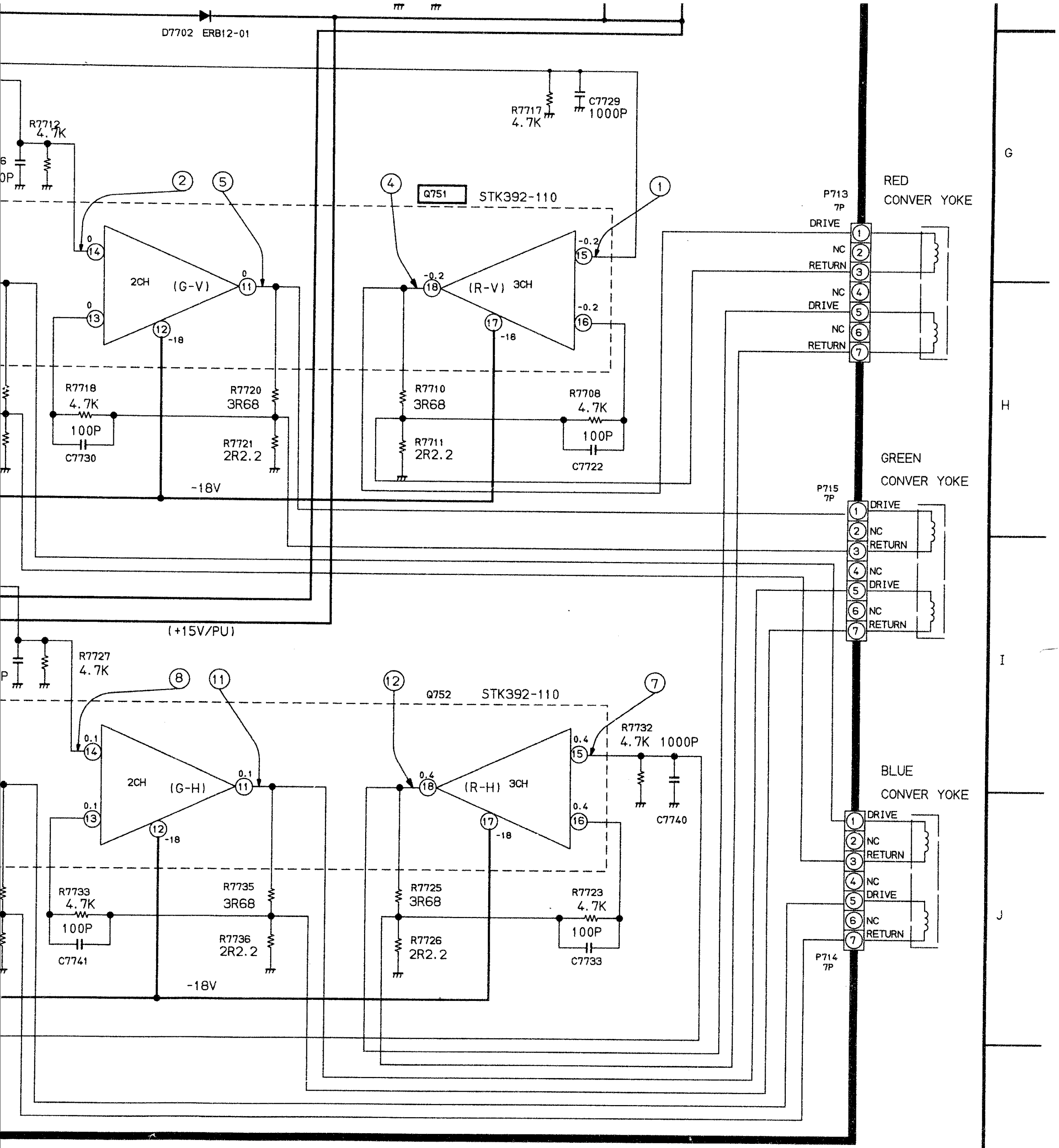
4. This schematic diagram is the latest the time of copying. so it must be changet in acordance with all informed modification notices.

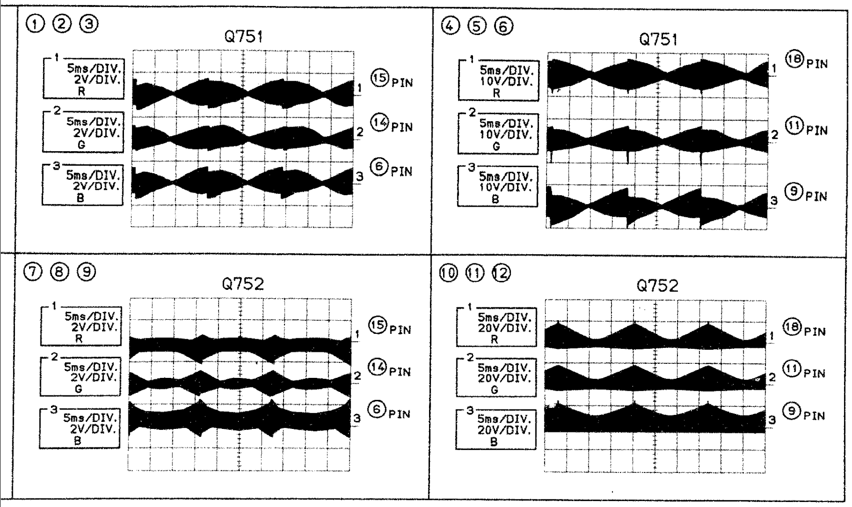
PG9060

4	5	6	7


Q764
TC74HC4049AP
C7776 25V47μ
C7768 M0.1
R7768 1K
NC
VDD
VSS
R7767 22K
D7708 1SS133
D7705 1SS133
D7706 1SS133
R7766 22K
C7764 PP330P
C7774 330P
RV
GV
BV
GH
BH
RH
VD
5ms/DIV.
2V/DIV.
R7771 1K
R7772 1K
R7781 33K
C7769 0.01
D7720 MTZJ6.2B
D7721 MTZJ6.2B
D7722 MTZJ6.2B
R7804 100
R7805 100
R7806 100
R7807 1K
R7808 100K
C7777 0.01
R7779 1K
C7742 33p
C7743 33p
D7718 MTZJ6.2B
D7717 MTZJ6.2B
Q767
TC4066BP
D7709 MTZJ6.2B
C7767 25V47μ
R7780 1K
D7719 MTZJ6.2B
+5V-1
D7801 1SS133
Q780 2SA1015Y
-18
R7770 2.2K
D7802 1SS133
D7803 1SS133
R7801 4.7K
R7802 10K
R795 4.7K
R796 6.8K
D7729 1SS133
R7803 10K
R731 10K
R793 47K
R792 47K
Q781 2SC1815Y
Q782 2SC1815Y
R730 100K
Q702 2SC1815Y
L7709 PL-1
L7710 PL-1
P015 8P
CONV R
GND
CONV G
GND
CONV B
GND
CONV Ys
I2C STP
TO SELECT P015A
P035 8P
CO MUTE
GND
SDA1
SCL1
GND
A BLK
VD
HD
TO DEF M035
8
9
10
11


RV
GV
BV
GH
BH
RH
D7702 ERB12-01
R7717 4.7K
100μ25V C7725
R7712 4.7K
C7726 1000P
③
⑥
②
⑤
④
Q751
STK392-110
1000P C7721
R7707 4.7K
1CH (B-V)
2CH (G-V)
(R-V) 3CH
R7713 4.7K
100P C7727
Q765 2SC1815Y
R7775 27K
R7776 4.7K
100μ25V C7724
R7715 3R68
R7716 2R2.2
R7718 4.7K
100P C7730
R7720 3R68
R7721 2R2.2
R7710 3R68
R7711 2R2.2
-18V
+30V
(+15V/PU)
C7736 100μ50V
C7737 1000P
R7727 4.7K
⑨
⑫
⑧
⑪
⑫
Q752
STK392-110
1000P C7732
R7722 4.7K
1CH (B-H)
2CH (G-H)
(R-H) 3CH
R7728 4.7K
100P C7738
Q766 2SC1815Y
R7777 27K
R7778 4.7K
100μ25V C7735
R7730 3R68
R7731 2R2.2
R7733 4.7K
100P C7741
R7735 3R68
R7736 2R2.2
R7725 3R68
R7726 2R2.2
-18V
+5V-1
D7801 1SS133
Q780 2SA1015Y
R7770 2.2K
D7802 1SS133
R7801 4.7K
R7802 10K
R7729
1SS133
R7803 10K
R731 10K
R732 47K
R733 47K
Q781 2SC1815Y
Q782 2SC1815Y
R730 100K
Q702 2SC1815Y
①
VD
5ms/DIV. 2V/DIV.
① ② ③
Q751
5ms/DIV. 2V/DIV. R
5ms/DIV. 2V/DIV. G
5ms/DIV. 2V/DIV. B
⑮PIN
⑭PIN
⑥PIN
④ ⑤ ⑥
Q751
5ms/DIV. 10V/DIV. R
5ms/DIV. 10V/DIV. G
5ms/DIV. 10V/DIV. B
②
HD
20us/DIV. 2V/DIV.
⑦ ⑧ ⑨
Q752
5ms/DIV. 2V/DIV. R
5ms/DIV. 2V/DIV. G
5ms/DIV. 2V/DIV. B
⑮PIN
⑭PIN
⑥PIN
⑩ ⑪ ⑫
Q752
5ms/DIV. 20V/DIV. R
5ms/DIV. 20V/DIV. G
5ms/DIV. 20V/DIV. B
11
12
13
14


D7702 ERB12-01
R7712 4.7K
R7717 4.7K
C7729 1000P
Q751
STK392-110
② ⑤ ④ ①
2CH (G-V)
(R-V) 3CH
R7718 4.7K
100P
C7730
R7720 3R68
R7721 2R2.2
R7710 3R68
R7711 2R2.2
R7708 4.7K
100P
C7722
-18V
RED
CONVER YOKE
P713 7P
DRIVE
NC
RETURN
GREEN
CONVER YOKE
P715 7P
(+15V/PU)
R7727 4.7K
⑧ ⑪ ⑫ ⑦
Q752
STK392-110
2CH (G-H)
(R-H) 3CH
R7732 4.7K 1000P
C7740
R7733 4.7K
100P
C7741
R7735 3R68
R7736 2R2.2
R7725 3R68
R7726 2R2.2
R7723 4.7K
100P
C7733
BLUE
CONVER YOKE
P714 7P
G
H
I
J
K
L


① ② ③
Q751
5ms/DIV. 2V/DIV. R
5ms/DIV. 2V/DIV. G
5ms/DIV. 2V/DIV. B
⑮PIN
⑭PIN
⑥PIN
④ ⑤ ⑥
Q751
5ms/DIV. 10V/DIV. R
5ms/DIV. 10V/DIV. G
5ms/DIV. 10V/DIV. B
⑱PIN
⑪PIN
⑨PIN
⑦ ⑧ ⑨
Q752
5ms/DIV. 2V/DIV. R
5ms/DIV. 2V/DIV. G
5ms/DIV. 2V/DIV. B
⑮PIN
⑭PIN
⑥PIN
⑩ ⑪ ⑫
Q752
5ms/DIV. 20V/DIV. R
5ms/DIV. 20V/DIV. G
5ms/DIV. 20V/DIV. B
⑱PIN
⑪PIN
⑨PIN

SCHEMATIC DIAGRAM MODEL : 50N9UXE / 50N9UXH (4/6)
50N9UXA / 50N9UXM

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 3. Do not degrade the safety of the receiver through improper servicing.

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position. Set other controls for best picture.

NOTES:

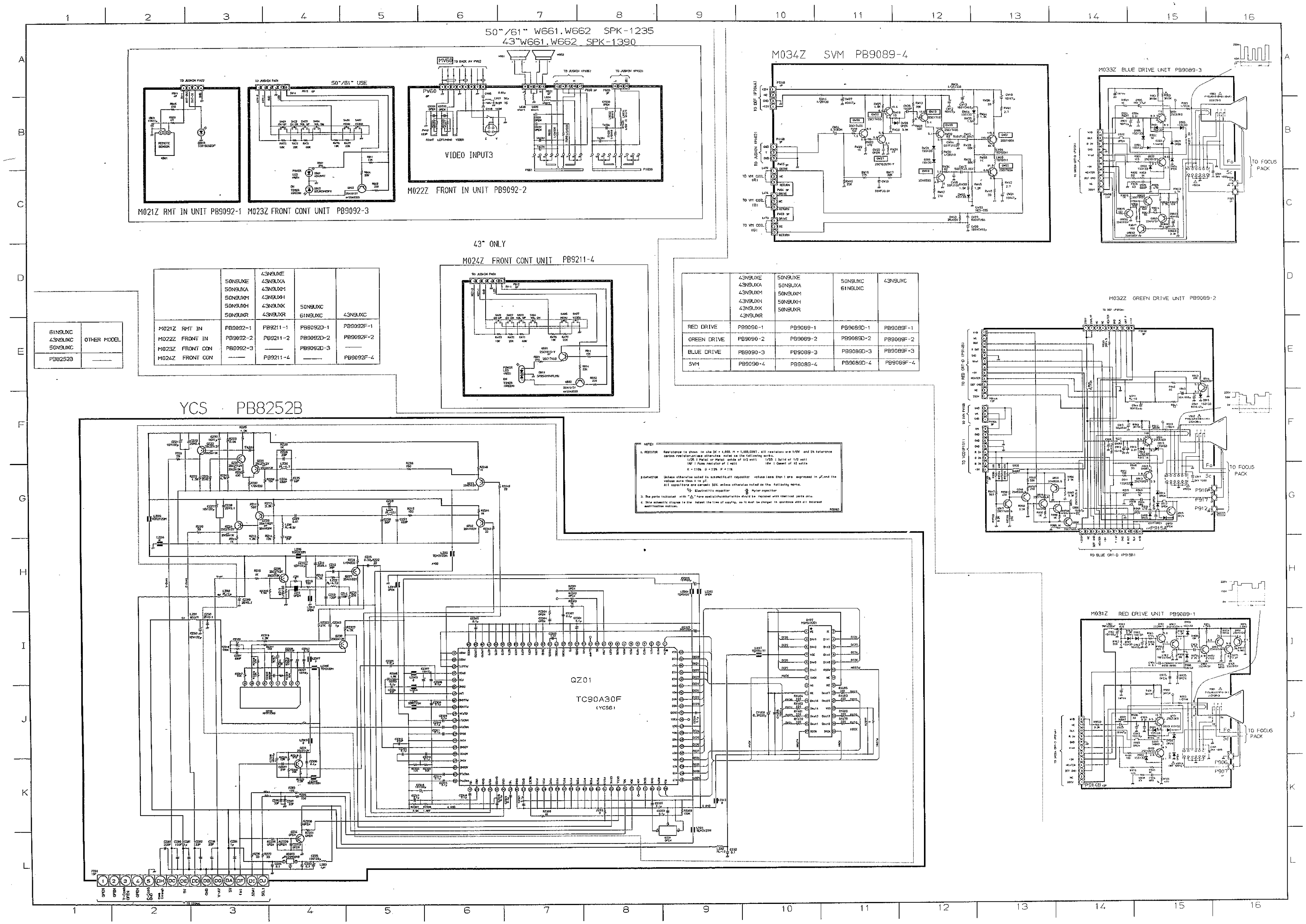
1. D.C. resistance value of a principal transformer is shown in this schematic diagram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH, and the values less than 1 in H.

040-9909


50"/61" W661.W662 SPK-1235
43"W661.W662 SPK-1390
50"/61" USE
MV60
PV60
VIDEO INPUT3
M021Z RMT IN UNIT PB9092-1
M023Z FRONT CONT UNIT PB9092-3
M022Z FRONT IN UNIT PB9092-2
43" ONLY
M024Z FRONT CONT UNIT PB9211-4
M034Z SVM PB9089-4
TO VM COIL (G)
M033Z BLUE DRIVE UNIT PB9089-3
M032Z GREEN DRIVE UNIT PB9089-2
M031Z RED DRIVE UNIT PB9089-1
TO FOCUS PACK
Fo
Sc
P917
P912
P906
P907
YCS PB8252B
QZ01
TC90A30F
(YCS6)
A
B
C
D
E
F
G
H
I
J
K
L
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

61N9UXC 43N9UXC 50N9UXC	OTHER MODEL
PB8252B	———

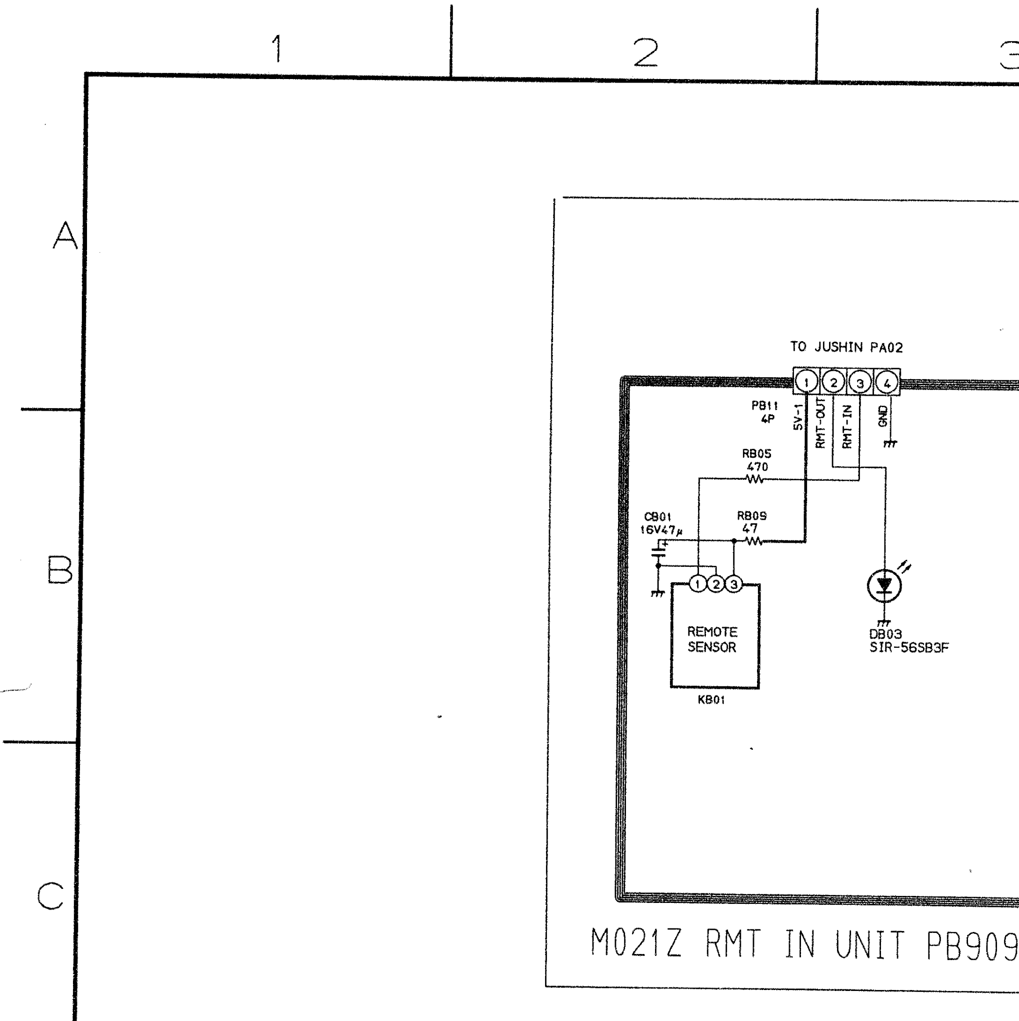
	50N9UXE 50N9UXA 50N9UXM 50N9UXH 50N9UXR	43N9UXE 43N9UXA 43N9UXM 43N9UXH 43N9UXK 43N9UXR	50N9UXC 61N9UXC	43N9UXC
M021Z RMT IN	PB9092-1	PB9211-1	PB9092D-1	PB9092F-1
M022Z FRONT IN	PB9092-2	PB9211-2	PB9092D-2	PB9092F-2
M023Z FRONT CON	PB9092-3	———	PB9092D-3	———
M024Z FRONT CON	———	PB9211-4	———	PB9092F-4

	43N9UXE 43N9UXA 43N9UXM 43N9UXH 43N9UXK 43N9UXR	50N9UXE 50N9UXA 50N9UXM 50N9UXH 50N9UXR	50N9UXC 61N9UXC	43N9UXC
RED DRIVE	PB9090-1	PB9089-1	PB9089D-1	PB9089F-1
GREEN DRIVE	PB9090-2	PB9089-2	PB9089D-2	PB9089F-2
BLUE DRIVE	PB9090-3	PB9089-3	PB9089D-3	PB9089F-3
SVM	PB9090-4	PB9089-4	PB9089D-4	PB9089F-4

SCHEMATIC DIAGRAM MODEL : 50N9UXE / 50N9UX
50N9UXA / 50N9UX

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate com- ponents which have special characteristics important for safety and should be replaced only with types identic those in the original circuit or specified in the parts list. The mounting position of replacements is to be identica with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on 3. Do not degrade the safety of the receiver through improper servicing.

040-9909


1
2
A
B
C
TO JUSHIN PA02
PB11
4P
5V-1
RMT-OUT
RMT-IN
GND
RB05
470
RB09
47
CB01
16V47μ
REMOTE
SENSOR
KB01
DB03
SIR-56SB3F
M021Z RMT IN UNIT PB909

61N9UXC 43N9UXC 50N9UXC	OTHER MODEL

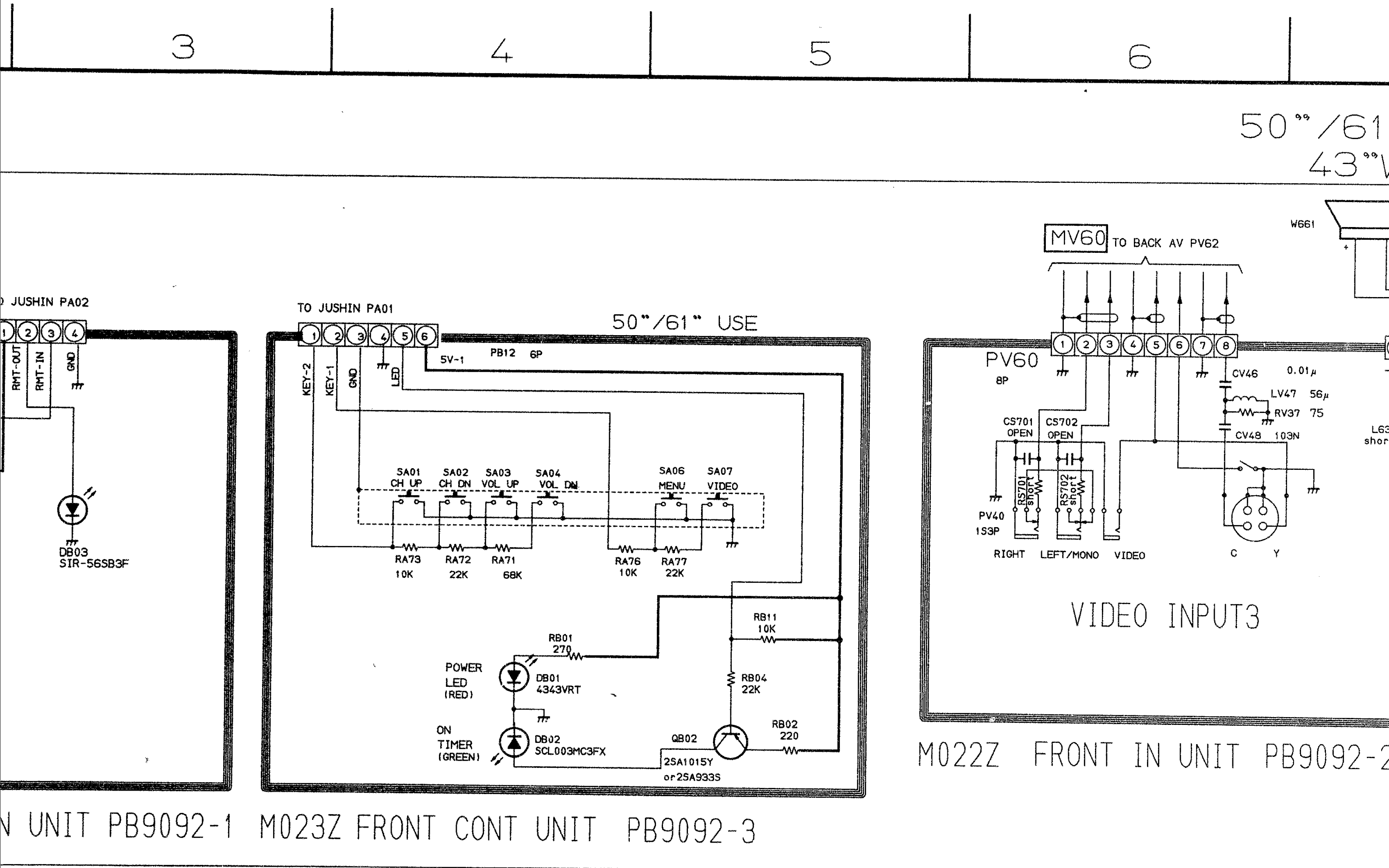
	50 50 50 50 50
M021Z RMT IN	PB
M022Z FRONT IN	PB

0N9UXH (4/6)
0N9UXM

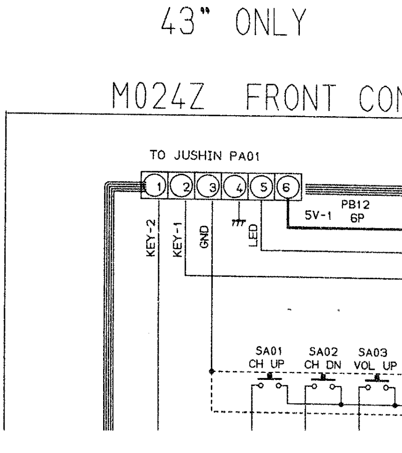
designate com-
ith types identical to
is to be identical
TY NOTICE on page

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position. Set other controls for best picture.


3
4
5
6
50"/61
43"
JUSHIN PA02
RMT-OUT
RMT-IN
GND
DB03
SIR-56SB3F
N UNIT PB9092-1
TO JUSHIN PA01
50"/61" USE
KEY-2
KEY-1
GND
LED
5V-1
PB12 6P
SA01 CH UP
SA02 CH DN
SA03 VOL UP
SA04 VOL DN
SA06 MENU
SA07 VIDEO
RA73 10K
RA72 22K
RA71 68K
RA76 10K
RA77 22K
RB01 270
RB11 10K
POWER LED (RED)
DB01 4343VRT
RB04 22K
ON TIMER (GREEN)
DB02 SCL003MC3FX
QB02
2SA1015Y or2SA933S
RB02 220
M023Z FRONT CONT UNIT PB9092-3
MV60 TO BACK AV PV62
W661
PV60 8P
CV46 0.01μ
LV47 56μ
RV37 75
CV48 103N
CS701 OPEN
CS702 OPEN
RS701 short
RS702 short
PV40 1S3P
RIGHT
LEFT/MONO
VIDEO
C
Y
L63 shor
VIDEO INPUT3
M022Z FRONT IN UNIT PB9092-2

	50N9UXE 50N9UXA 50N9UXM 50N9UXH 50N9UXR	43N9UXE 43N9UXA 43N9UXM 43N9UXH 43N9UXK 43N9UXR	50N9UXC 61N9UXC	43N9UXC
T IN	PB9092-1	PB9211-1	PB9092D-1	PB9092F-1


43" ONLY
M024Z FRONT CO
TO JUSHIN PA01
KEY-2
KEY-1
GND
LED
5V-1
PB12 6P
SA01 CH UP
SA02 CH DN
SA03 VOL UP

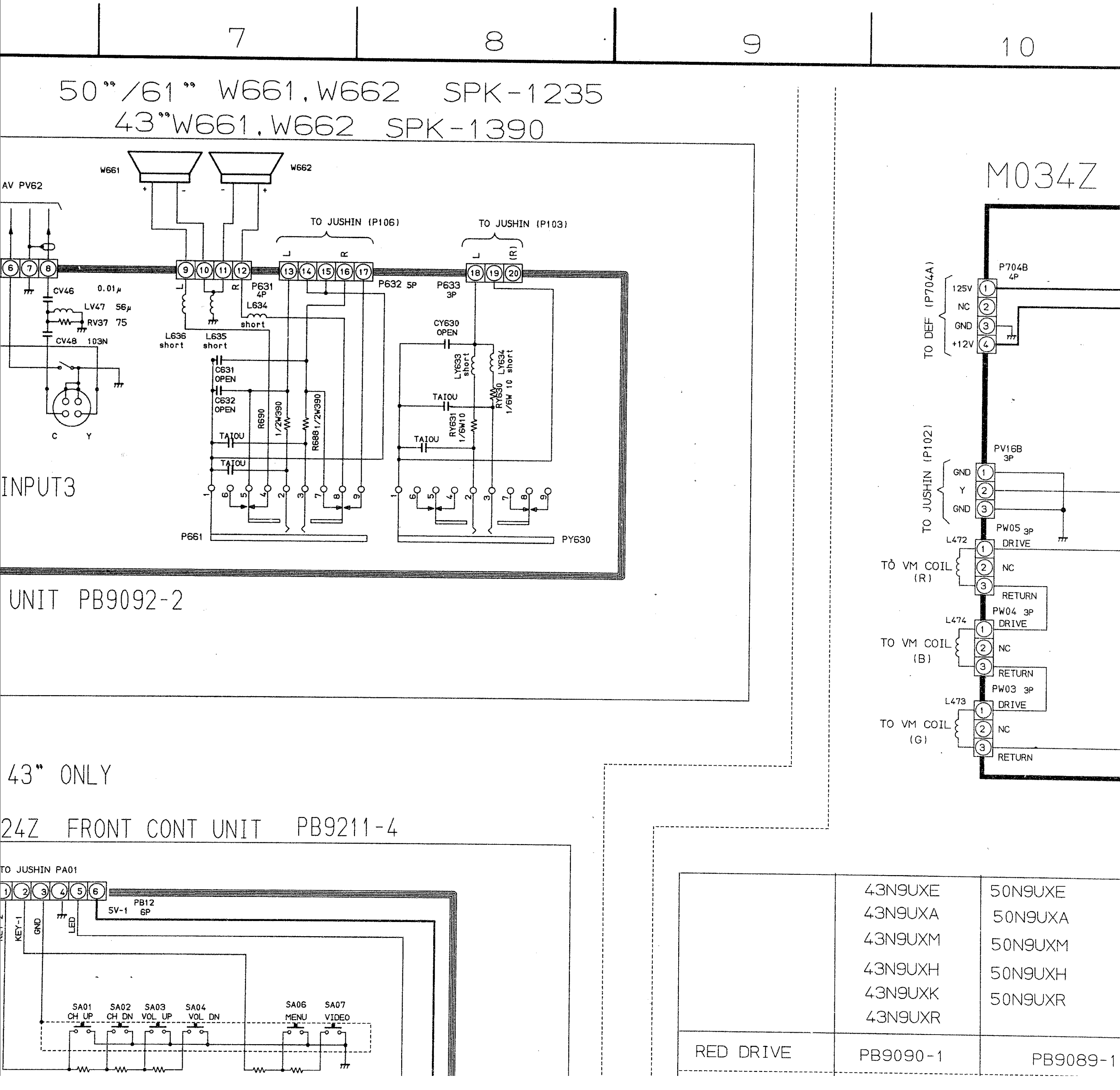
d, line voltage 220

ow capacity probe.

mid position and
r controls for best

NOTES:

1. D.C. resistance value of a principal transformer is shown in this schem gram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.



7
8
9
10
50"/61" W661, W662 SPK-1235
43"W661, W662 SPK-1390
W661
W662
AV PV62
TO JUSHIN (P106)
TO JUSHIN (P103)
P631 4P
P632 5P
P633 3P
CV46 0.01μ
LV47 56μ
RV37 75
CV48 103N
L636 short
L635 short
L634 short
C631 OPEN
C632 OPEN
TAIOU
R690 1/2W390
R688 1/2W390
CY630 OPEN
LY633 short
LY634 short
RY630 1/6W 10
RY631 1/6W10
C Y
INPUT3
P661
PY630
UNIT PB9092-2
43" ONLY
24Z FRONT CONT UNIT PB9211-4
TO JUSHIN PA01
PB12 6P
5V-1
KEY-1
GND
LED
SA01 CH UP
SA02 CH DN
SA03 VOL UP
SA04 VOL DN
SA06 MENU
SA07 VIDEO
M034Z
TO DEF (P704A)
P704B 4P
125V
NC
GND
+12V
TO JUSHIN (P102)
PV16B 3P
GND
Y
GND
PW05 3P
L472
DRIVE
TO VM COIL (R)
NC
RETURN
PW04 3P
L474
TO VM COIL (B)
PW03 3P
L473
TO VM COIL (G)

	43N9UXE 43N9UXA 43N9UXM 43N9UXH 43N9UXK 43N9UXR	50N9UXE 50N9UXA 50N9UXM 50N9UXH 50N9UXR
RED DRIVE	PB9090-1	PB9089-1

EXPRESSION

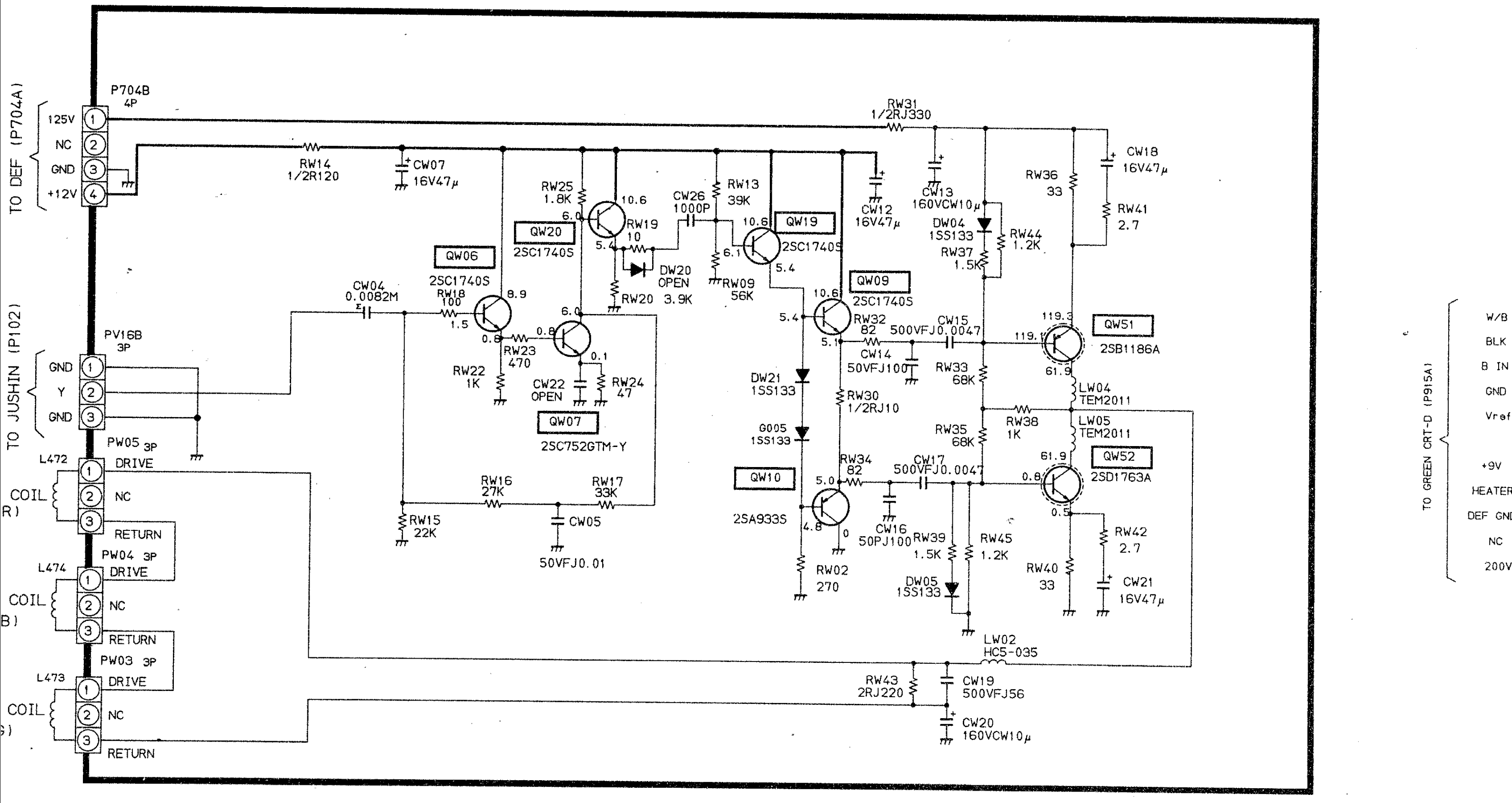
shown in this schematic dia-
ircuit.

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less
   sed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more
   sed in μH, and the values less than 1 in H.

10 11 12 13 1

M034Z SVM PB9089-4

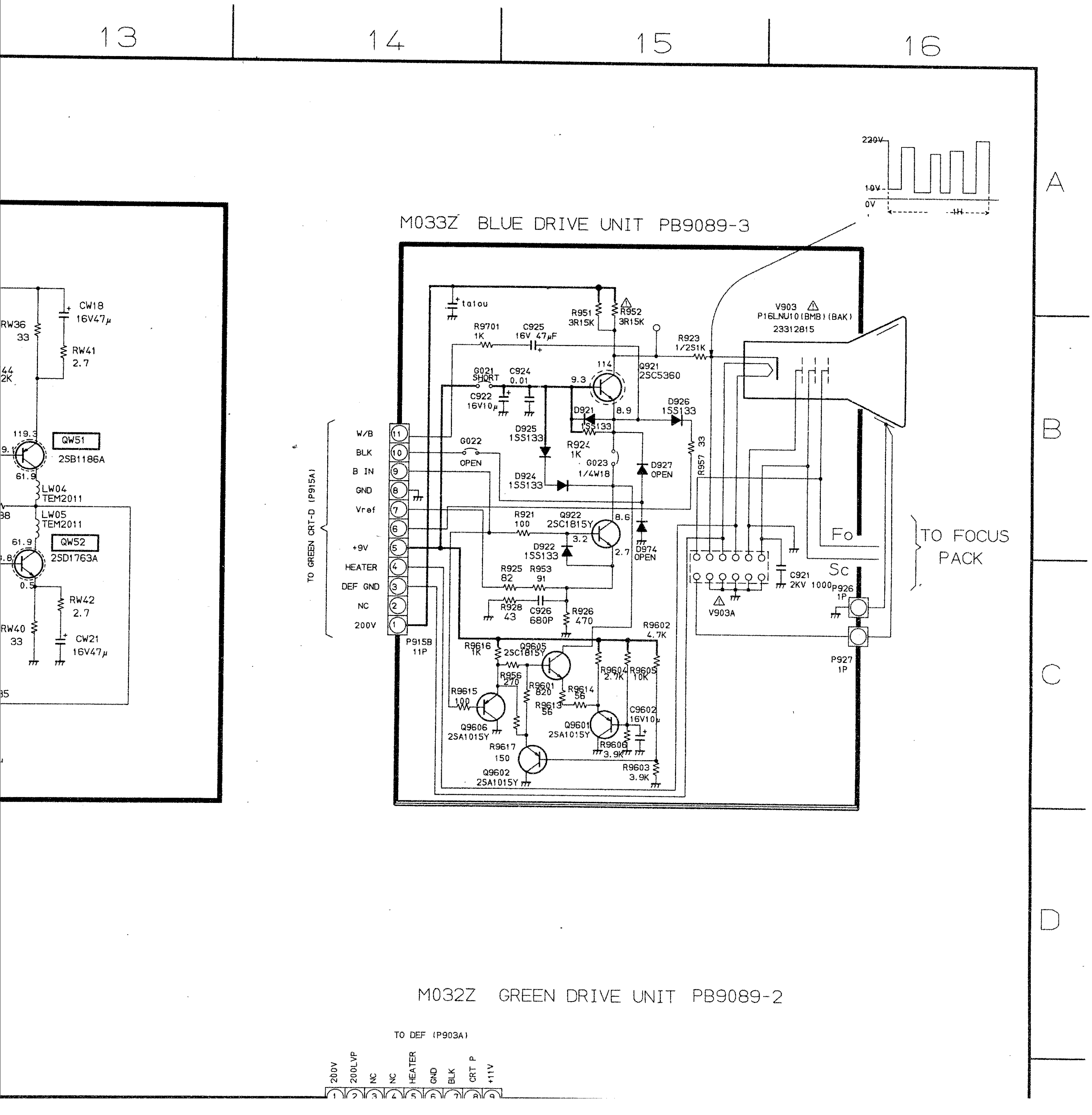


TO DEF (P704A)
P704B 4P
125V
NC
GND
+12V
TO JUSHIN (P102)
PV16B 3P
GND
Y
GND
PW05 3P
L472
DRIVE
COIL
R)
NC
RETURN
PW04 3P
L474
DRIVE
COIL
B)
NC
RETURN
PW03 3P
L473
DRIVE
COIL
NC
RETURN
RW14 1/2R120
CW07 16V47μ
CW04 0.0082M
RW18 100
QW06 2SC1740S
RW22 1K
RW23 470
QW07 2SC752GTM-Y
CW22 OPEN
RW24 47
RW25 1.8K
QW20 2SC1740S
RW19 10
DW20 OPEN
RW20 3.9K
CW26 1000P
RW13 39K
RW09 56K
QW19 2SC1740S
RW16 27K
RW17 33K
RW15 22K
CW05 50VFJ0.01
RW31 1/2RJ330
CW12 16V47μ
CW13 160VCW10μ
DW04 1SS133
RW37 1.5K
RW44 1.2K
RW36 33
CW18 16V47μ
RW41 2.7
QW09 2SC1740S
RW32 82
CW15 500VFJ0.0047
CW14 50VFJ100
RW33 68K
QW51 2SB1186A
LW04 TEM2011
LW05 TEM2011
DW21 1SS133
G005 1SS133
RW30 1/2RJ10
RW35 68K
RW38 1K
QW52 2SD1763A
QW10 2SA933S
RW34 82
CW17 500VFJ0.0047
CW16 50PJ100
RW39 1.5K
RW45 1.2K
DW05 1SS133
RW42 2.7
RW40 33
CW21 16V47μ
RW02 270
LW02 HC5-035
RW43 2RJ220
CW19 500VFJ56
CW20 160VCW10μ
TO GREEN CRT-D (P915A)
W/B
BLK
B IN
GND
Vref
+9V
HEATER
DEF GND
NC
200V
10.6
6.0
5.4
8.9
1.5
0.8
0.1
6.1
5.4
10.6
5.1
4.8
5.0
0
119.3
119.1
61.9
0.8
0.5

XE XA XM XH XK XR	50N9UXE 50N9UXA 50N9UXM 50N9UXH 50N9UXR	50N9UXC 61N9UXC	43N9UXC

APACITOR and INDUCTOR

m, k=1,000, M=1,000,000
in schematic, all capacitor values less than 1 are expres-
nore than 1 in pF.
n schematic, all inductor values more than 1 are expres-
less than 1 in H.


13
14
15
16
A
B
C
D
M033Z BLUE DRIVE UNIT PB9089-3
220V
10V
0V
V903 P16LNU10(BMB)(BAK) 23312815
TO FOCUS PACK
Fo
Sc
C921 2KV 1000P
V903A
P926 1P
P927 1P
Q921 2SC5360
R951 3R15K
R952 3R15K
R923 1/2S1K
R9701 1K
C925 16V 47μF
G021 SHORT
C924 0.01
C922 16V10μ
D921 1SS133
D926 1SS133
D925 1SS133
R924 1K
G023 1/4W18
D927 OPEN
R957 33
G022 OPEN
D924 1SS133
Q922 2SC1815Y
R921 100
D922 1SS133
D974 OPEN
R925 82
R953 91
R928 43
C926 680P
R926 470
R9602 4.7K
R9616 1K
Q9605 2SC1815Y
R956 270
R9601 820
R9614 56
R9613 56
R9604 2.7K
R9605 10K
R9615 100
Q9606 2SA1015Y
Q9601 2SA1015Y
C9602 16V10μ
R9606 3.9K
R9617 150
Q9602 2SA1015Y
R9603 3.9K
TO GREEN CRT-D (P915A)
W/B
BLK
B IN
GND
Vref
+9V
HEATER
DEF GND
NC
200V
P915B 11P
CW18 16V47μ
RW36 33
RW41 2.7
QW51 2SB1186A
LW04 TEM2011
LW05 TEM2011
QW52 2SD1763A
RW42 2.7
RW40 33
CW21 16V47μ
M032Z GREEN DRIVE UNIT PB9089-2
TO DEF (P903A)
200V
200LVP
NC
NC
HEATER
GND
BLK
CRT P
+11V

D

E

F

G

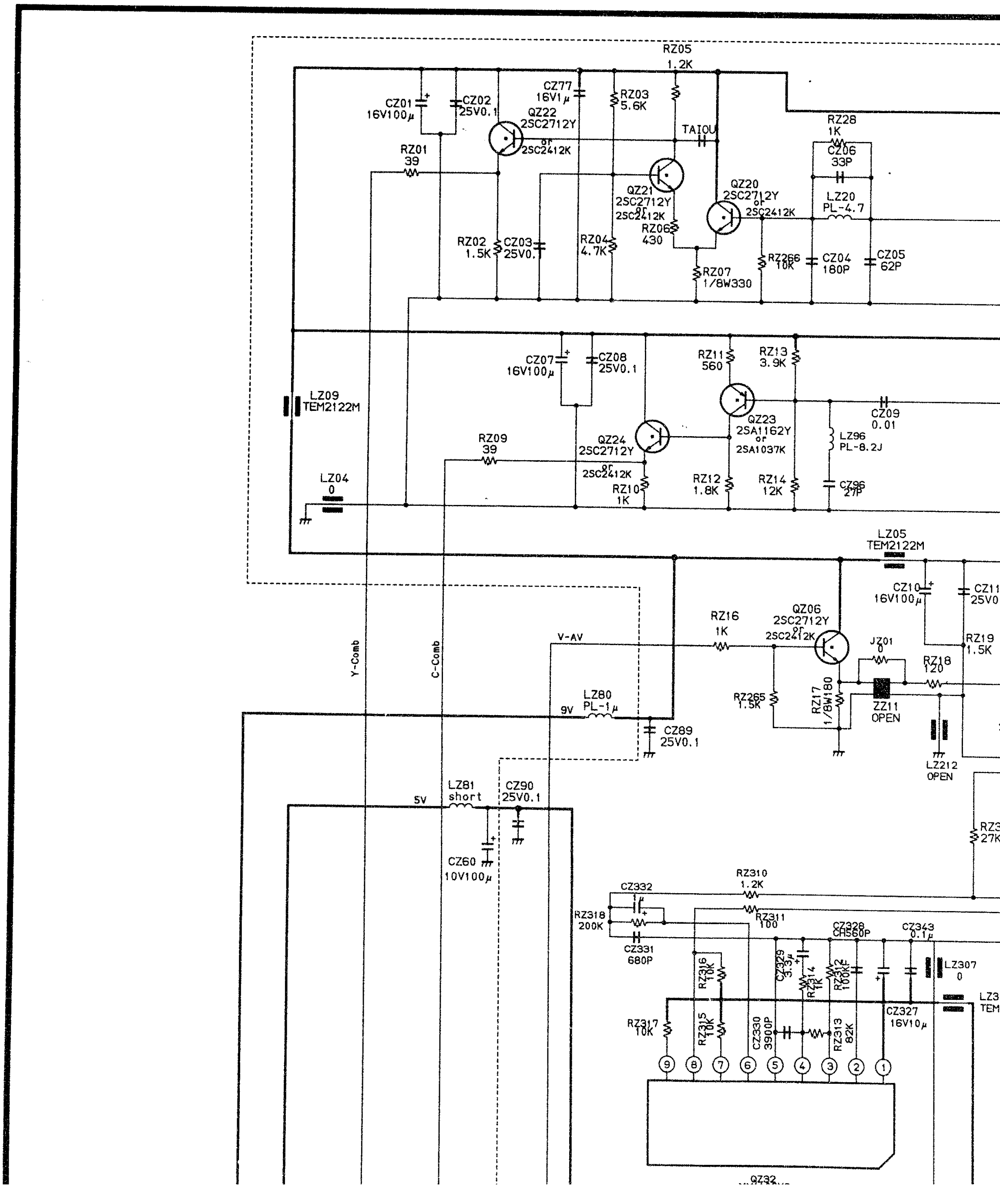
H

I

61N9UXC 43N9UXC 50N9UXC	OTHER MODEL
PB8252B	———

	50N9UXE 50N9UXA 50N9UXM 50N9UXH 50N9UXR	43N9UXE 43N9UXA 43N9UXM 43N9UXH 43N9UXK 43N9UXR	50N9UX 61N9UX
M021Z RMT IN	PB9092-1	PB9211-1	PB9092
M022Z FRONT IN	PB9092-2	PB9211-2	PB9092
M023Z FRONT CON	PB9092-3	———	PB9092
M024Z FRONT CON	———	PB9211-4	———

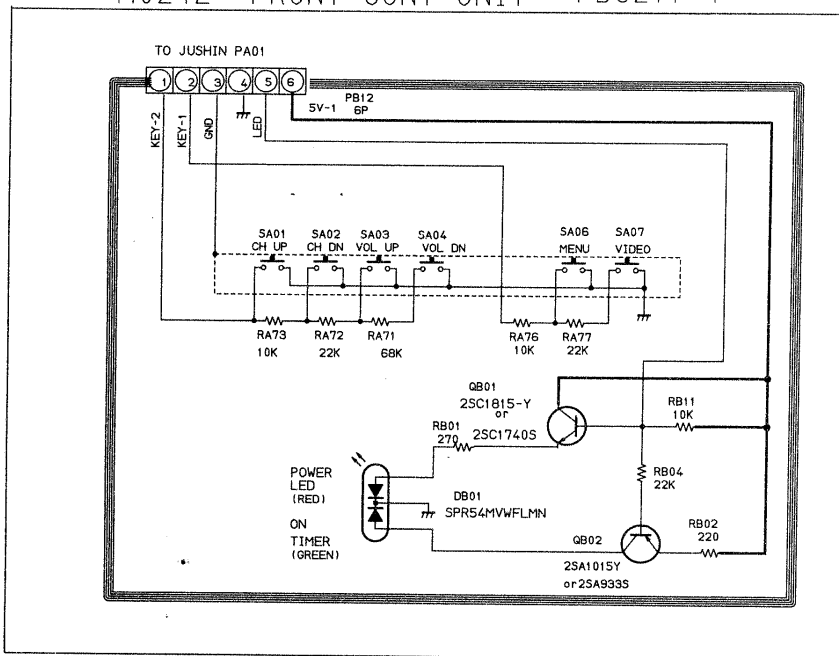
YCS PB8252B


RZ05
1.2K
CZ01
16V100μ
CZ02
25V0.1
CZ77
16V1μ
QZ22
2SC2712Y
or
2SC2412K
RZ03
5.6K
TAIOU
RZ01
39
QZ21
2SC2712Y
or
2SC2412K
RZ06
430
QZ20
2SC2712Y
or
2SC2412K
RZ28
1K
CZ06
33P
LZ20
PL-4.7
RZ02
1.5K
CZ03
25V0.1
RZ04
4.7K
RZ07
1/8W330
RZ266
10K
CZ04
180P
CZ05
62P
CZ07
16V100μ
CZ08
25V0.1
RZ11
560
RZ13
3.9K
LZ09
TEM2122M
QZ23
2SA1162Y
or
2SA1037K
CZ09
0.01
RZ09
39
QZ24
2SC2712Y
or
2SC2412K
LZ96
PL-8.2J
LZ04
0
RZ10
1K
RZ12
1.8K
RZ14
12K
CZ96
27P
LZ05
TEM2122M
CZ10
16V100μ
CZ11
25V0
QZ06
2SC2712Y
or
2SC2412K
RZ16
1K
V-AV
Y-Comb
C-Comb
JZ01
0
RZ19
1.5K
RZ18
120
RZ265
1.5K
RZ17
1/8W180
ZZ11
OPEN
LZ80
PL-1μ
9V
CZ89
25V0.1
LZ212
OPEN
LZ81
short
CZ90
25V0.1
5V
RZ3
27K
CZ60
10V100μ
CZ332
1μ
RZ310
1.2K
RZ318
200K
RZ311
100
CZ331
680P
CZ328
CH560P
CZ343
0.1μ
RZ316
10K
CZ329
3.3μ
RZ314
1K
RZ312
100KF
LZ307
0
LZ3
TEM
RZ317
10K
RZ315
10K
CZ330
3900P
RZ313
82K
CZ327
16V10μ
9
8
7
6
5
4
3
2
1
QZ32

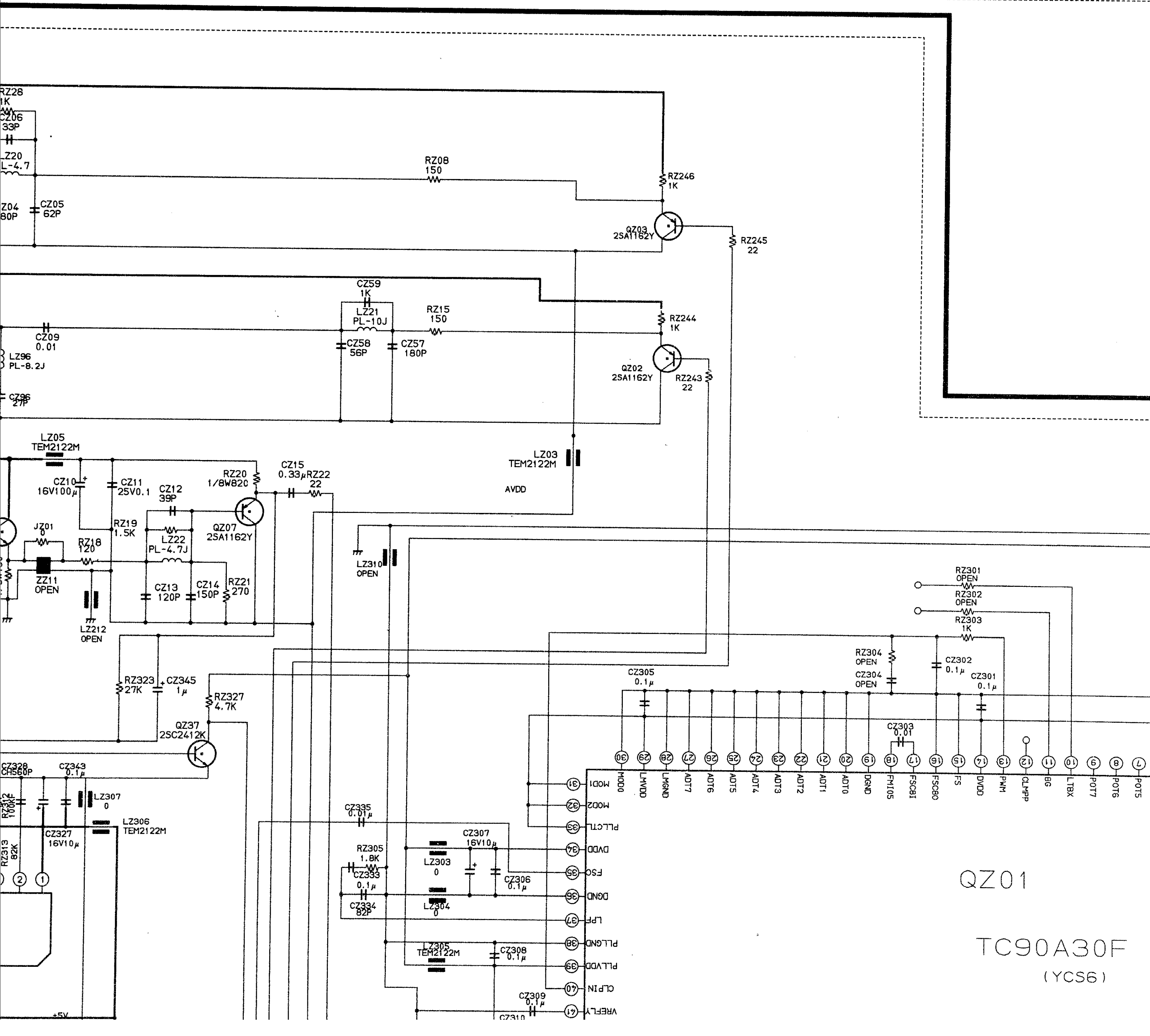
43" ONLY

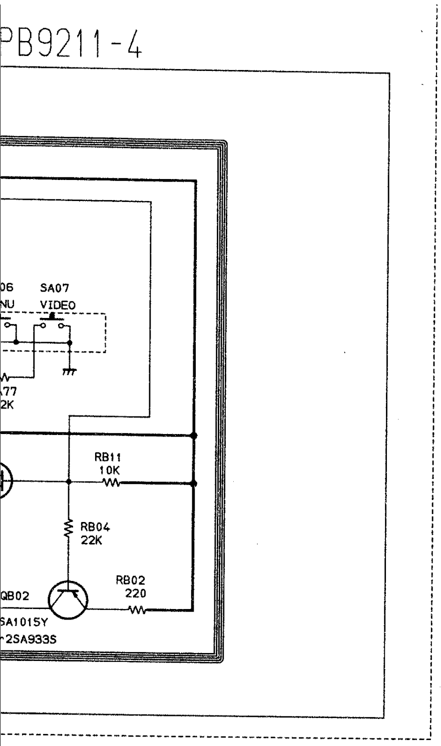
M024Z FRONT CONT UNIT PB9211-4

XE XA XM XH XK XR	50N9UXC 61N9UXC	43N9UXC
1-1	PB9092D-1	PB9092F-1
1-2	PB9092D-2	PB9092F-2
—	PB9092D-3	———
1-4	———	PB9092F-4


TO JUSHIN PA01
1
2
3
4
5
6
KEY-2
KEY-1
GND
LED
5V-1
PB12
6P
SA01
CH UP
SA02
CH DN
SA03
VOL UP
SA04
VOL DN
SA06
MENU
SA07
VIDEO
RA73
10K
RA72
22K
RA71
68K
RA76
10K
RA77
22K
QB01
2SC1815-Y
or
2SC1740S
RB11
10K
RB01
270
RB04
22K
POWER
LED
(RED)
DB01
SPR54MVWFLMN
ON
TIMER
(GREEN)
QB02
2SA1015Y
or 2SA933S
RB02
220

52B


RZ28
1K
CZ06
33P
LZ20
PL-4.7
RZ08
150
RZ246
1K
Z04
80P
CZ05
62P
QZ03
2SA1162Y
RZ245
22
CZ59
1K
LZ21
PL-10J
RZ15
150
RZ244
1K
CZ09
0.01
LZ96
PL-8.2J
CZ58
56P
CZ57
180P
QZ02
2SA1162Y
RZ243
22
CZ96
27P
LZ05
TEM2122M
CZ10
16V100μ
CZ11
25V0.1
CZ12
39P
RZ20
1/8W820
CZ15
0.33μ
RZ22
22
LZ03
TEM2122M
AVDD
RZ19
1.5K
QZ07
2SA1162Y
JZ01
0
RZ18
120
LZ22
PL-4.7J
ZZ11
OPEN
CZ13
120P
CZ14
150P
RZ21
270
LZ310
OPEN
LZ212
OPEN
RZ301
OPEN
RZ302
OPEN
RZ303
1K
RZ304
OPEN
CZ304
OPEN
CZ302
0.1μ
CZ301
0.1μ
RZ323
27K
CZ345
1μ
RZ327
4.7K
CZ305
0.1μ
QZ37
2SC2412K
CZ303
0.01
CZ328
CH560P
CZ343
0.1μ
LZ307
0
RZ312
100K
CZ327
16V10μ
LZ306
TEM2122M
RZ313
82K
2
1
CZ335
0.01μ
RZ305
1.8K
CZ333
0.1μ
CZ334
82P
LZ303
0
LZ304
0
CZ307
16V10μ
CZ306
0.1μ
LZ305
TEM2122M
CZ308
0.1μ
CZ309
0.1μ
CZ310
+5V
MOD0
LMVDD
LMGND
ADT7
ADT6
ADT5
ADT4
ADT3
ADT2
ADT1
ADT0
DGND
FMI05
FSCBI
FSC80
FS
DVDD
PWM
CLMPP
BG
LTBX
POT7
POT6
POT5
MOD1
MOD2
PLLCTL
DVDD
FSO
DGND
LPF
PLLGND
PLLVDD
CLPIN
VREFLY
QZ01
TC90A30F
(YCS6)


PB9211-4
06
SA07
NU
VIDEO
77
2K
RB11
10K
RB04
22K
QB02
RB02
220
SA1015Y
2SA933S

	43N9UXE 43N9UXA 43N9UXM 43N9UXH 43N9UXK 43N9UXR	50N9UXE 50N9UXA 50N9UXM 50N9UXH 50N9UXR	50N9UXC 61N9UXC	43N9UXC
RED DRIVE	PB9090-1	PB9089-1	PB9089D-1	PB9089F
GREEN DRIVE	PB9090-2	PB9089-2	PB9089D-2	PB9089F
BLUE DRIVE	PB9090-3	PB9089-3	PB9089D-3	PB9089F
SVM	PB9090-4	PB9089-4	PB9089D-4	PB9089F

NOTE:

1. RESISTOR Resistance is shown in ohm [K = 1,000. M = 1,000,000]. All resistors sre 1/6W and 5% tolerance carbon resistor.unless otherwise noted as the following marks.

1/2R : Metal or Metal oxide of 1/2 watt 1/2S : Solid of 1/2 watt
1RF : Fuse resistor of 1 watt 10W : Cement of 10 watts
K = ±10% G = ±2% F = ±1%

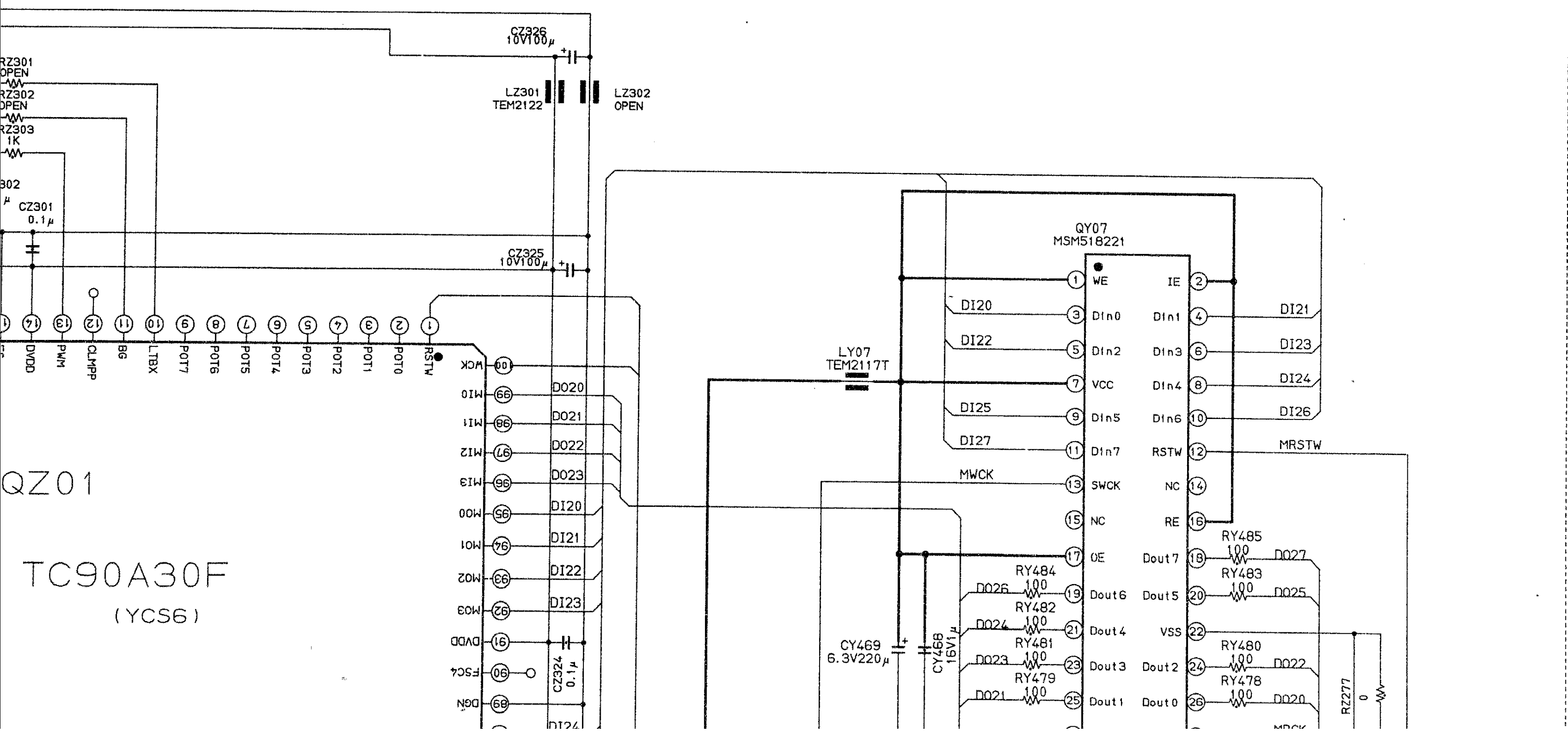
2. CAPACITOR Unless otherwise noted in schematic,all capacitor valuse less than 1 are expressed in μF,and the values more than 1 in pF.
All capacitors are ceramic 50V, unless otherwise noted as the following marks.

⊣⊢ Electrolitic capacitor ⊣⊢ Mylar capacitor

3. The parts indicated with "⚠" have special characteristics should be replaced with identical parts only.

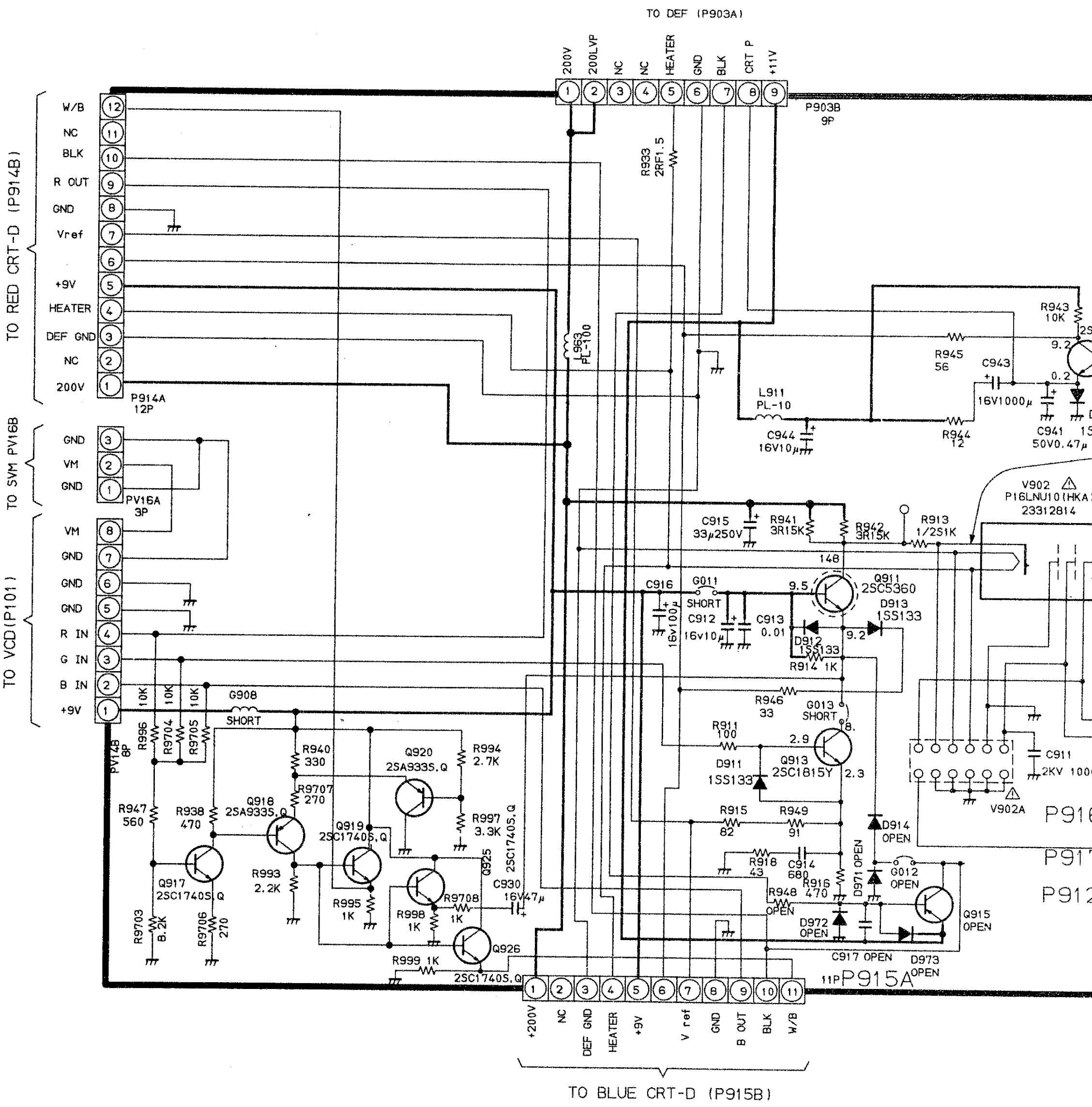
4. This schematic diagram is the latest the time of copying. so it must be changet in acordance with all informed modification notices.

PG9060


RZ301
OPEN
RZ302
OPEN
RZ303
1K
302
CZ301
0.1μ
CZ326
10V100μ
LZ301
TEM2122
LZ302
OPEN
CZ325
10V100μ
DVDD
PWM
CLMPP
BG
LTBX
POT7
POT6
POT5
POT4
POT3
POT2
POT1
POT0
RSTW
WCK
MI0
MI1
MI2
MI3
MO0
MO1
MO2
MO3
DVDD
FSC4
DGN
DO20
DO21
DO22
DO23
DI20
DI21
DI22
DI23
DI24
CZ324
0.1μ
QZ01
TC90A30F
(YCS6)
LY07
TEM2117T
QY07
MSM518221
WE
IE
Din0
Din1
Din2
Din3
VCC
Din4
Din5
Din6
Din7
RSTW
SWCK
NC
NC
RE
OE
Dout7
Dout6
Dout5
Dout4
VSS
Dout3
Dout2
Dout1
Dout0
DI20
DI21
DI22
DI23
DI24
DI25
DI26
DI27
MRSTW
MWCK
RY485
100
DO27
RY484
100
DO26
RY483
100
DO25
RY482
100
DO24
RY481
100
DO23
RY480
100
DO22
RY479
100
DO21
RY478
100
DO20
CY469
6.3V220μ
CY468
16V1μ
RZ277
0
MRCK

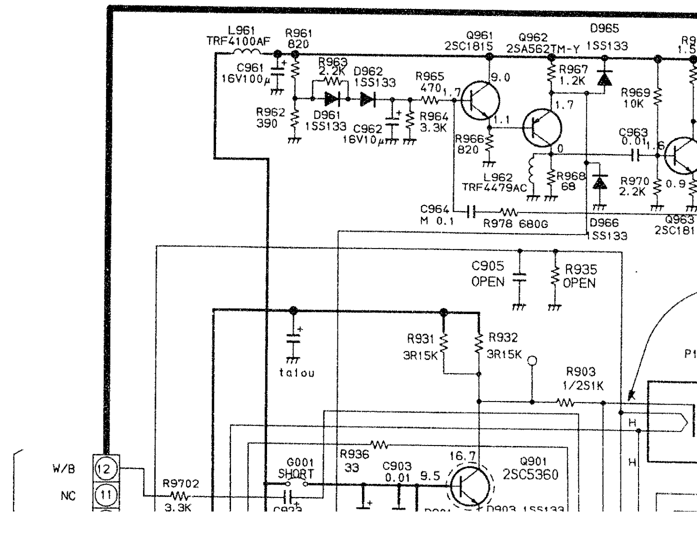
C C	43N9UXC
D-1	PB9089F-1
D-2	PB9089F-2
D-3	PB9089F-3
D-4	PB9089F-4

M032Z GREEN DRIVE UNIT PB90

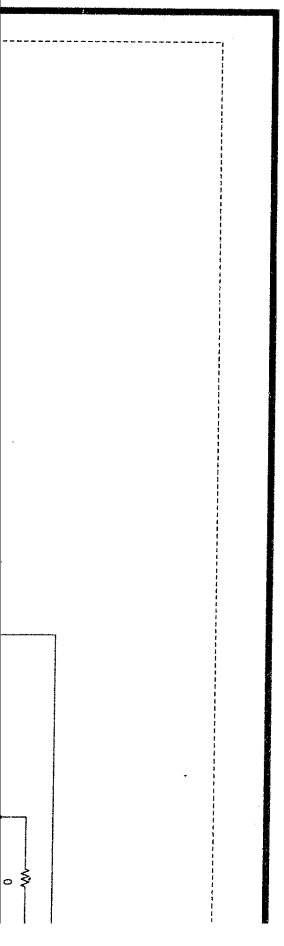


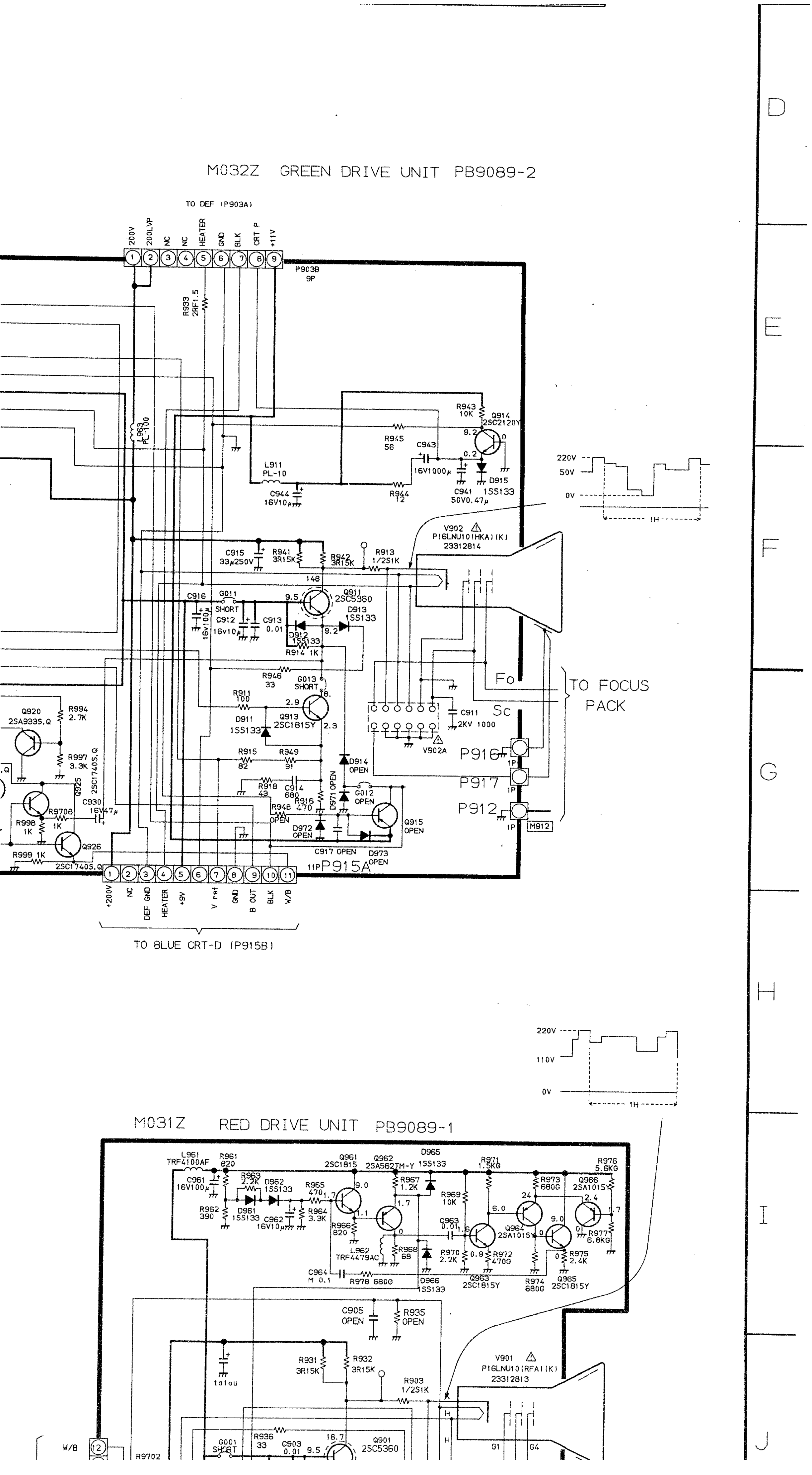
TO DEF (P903A)
200V
200LVP
NC
NC
HEATER
GND
BLK
CRT P
+11V
P903B
9P
TO RED CRT-D (P914B)
W/B
NC
BLK
R OUT
GND
Vref
+9V
HEATER
DEF GND
NC
200V
P914A
12P
TO SVM PV16B
GND
VM
GND
PV16A
3P
TO VCD(P101)
VM
GND
GND
GND
R IN
G IN
B IN
+9V
PV14B
8P
R933
2RF1.5
L963
PL-100
L911
PL-10
C944
16V10μ
R945
56
C943
16V1000μ
R944
12
C941
50V0.47μ
R943
10K
9.2
0.2
V902
P16LNU10(HKA)
23312814
C915
33μ250V
R941
3R15K
R942
3R15K
R913
1/2S1K
148
C916
16V100μ
G011
SHORT
C912
16v10μ
C913
0.01
D912
1SS133
R914 1K
9.5
Q911
2SC5360
D913
1SS133
9.2
R946
33
G013
SHORT
R911
100
D911
1SS133
2.9
Q913
2SC1815Y
2.3
8.
C911
2KV 100
V902A
R915
82
R949
91
D914
OPEN
R918
43
C914
680
R916
470
D971 OPEN
G012
OPEN
R948
OPEN
D972
OPEN
Q915
OPEN
C917 OPEN
D973
OPEN
11P
P915A
P91
P91
P91
10K
10K
10K
G908
SHORT
R996
R9704
R9705
R940
330
R9707
270
Q920
2SA9335.Q
R994
2.7K
R997
3.3K
R947
560
R938
470
Q918
2SA9335.Q
Q919
2SC1740S.Q
Q925
2SC1740S.Q
C930
16V47μ
Q917
2SC1740S.Q
R993
2.2K
R995
1K
R998
1K
R9708
1K
R9703
8.2K
R9706
270
R999 1K
Q926
2SC1740S.Q
+200V
NC
DEF GND
HEATER
+9V
V ref
GND
B OUT
BLK
W/B
TO BLUE CRT-D (P915B)

M031Z RED DRIVE UNIT PB9089-1



L961
TRF4100AF
R961
820
Q961
2SC1815
Q962
2SA562TM-Y
D965
1SS133
C961
16V100μ
R963
2.2K
D962
1SS133
R965
470
9.0
R967
1.2K
R969
10K
R962
390
D961
1SS133
C962
16V10μ
R964
3.3K
1.7
1.1
1.7
R966
820
0
C963
0.01
L962
TRF4479AC
R968
68
R970
2.2K
0.9
C964
M 0.1
R978 680G
D966
1SS133
Q963
2SC181
C905
OPEN
R935
OPEN
tatou
R931
3R15K
R932
3R15K
R903
1/2S1K
H
H
W/B
NC
R9702
3.3K
G001
SHORT
R936
33
C903
0.01
9.5
16.7
Q901
2SC5360
D903 1SS133

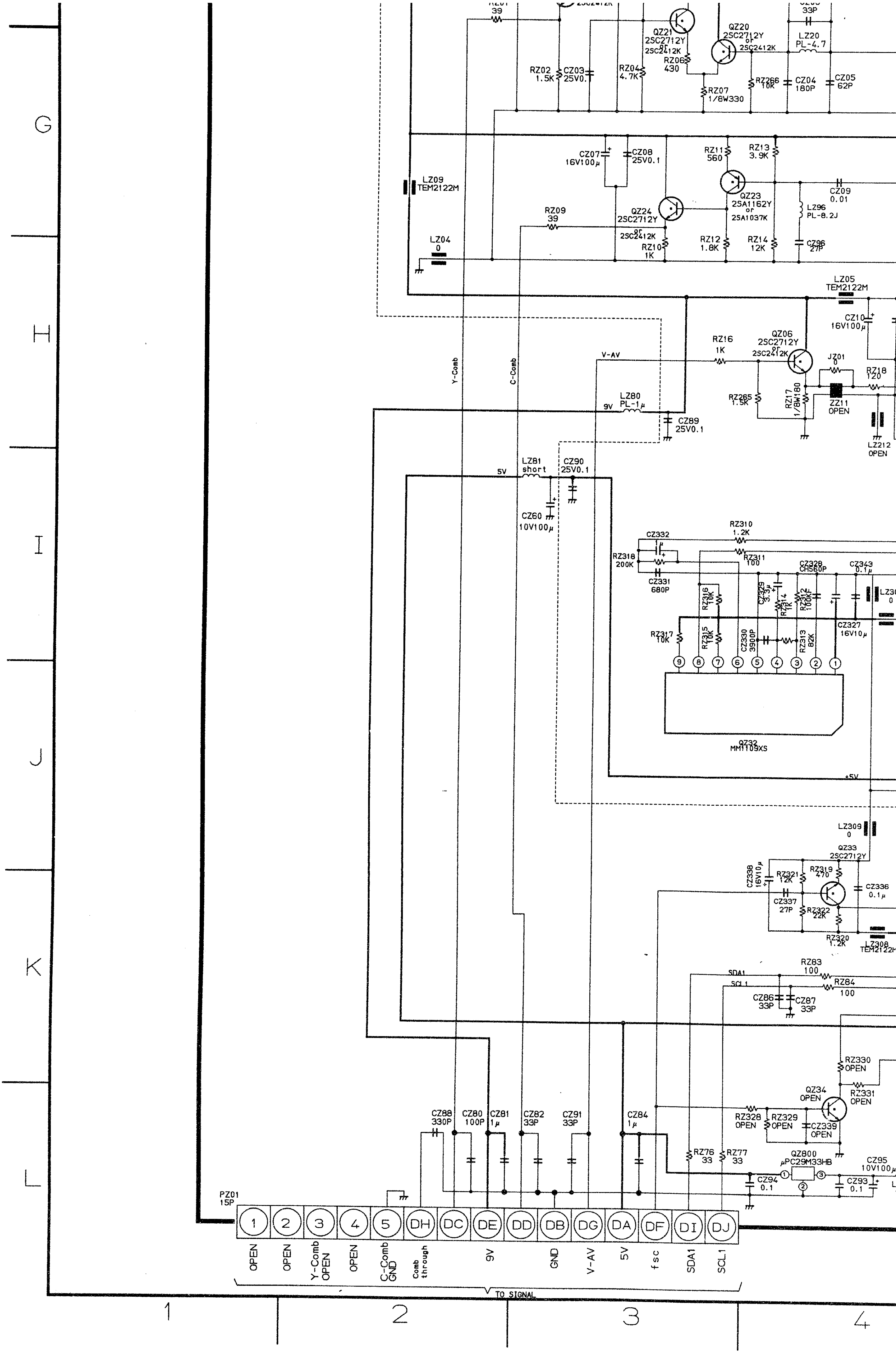


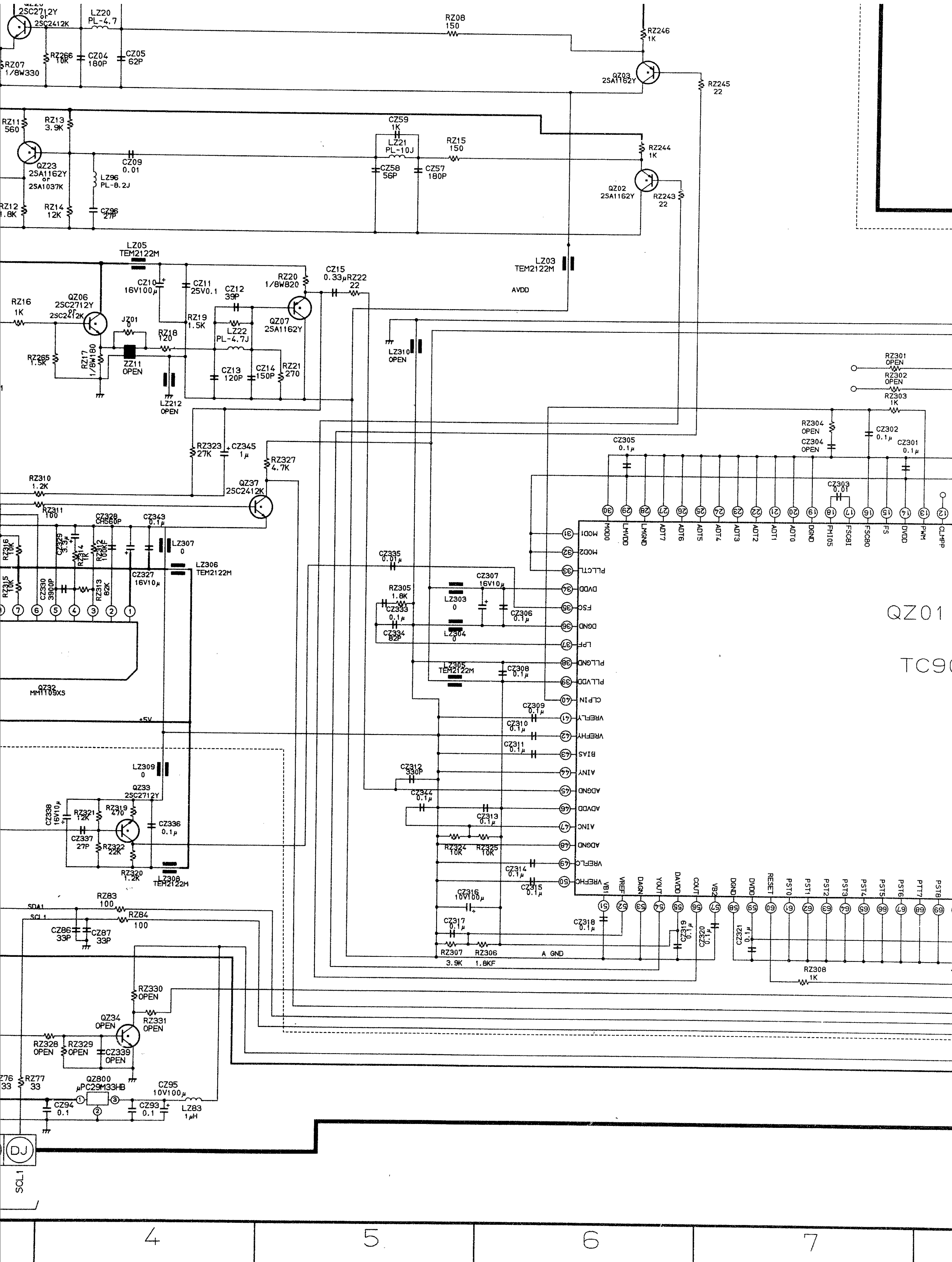


M032Z GREEN DRIVE UNIT PB9089-2

M031Z RED DRIVE UNIT PB9089-1

TO DEF (P903A)
200V
200LVP
NC
NC
HEATER
GND
BLK
CRT P
+11V
P903B 9P
R933 2RF1.5
L963 PL-100
R943 10K
Q914 2SC2120Y
R945 56
C943
16V1000μ
C941 50V0.47μ
D915 1SS133
L911 PL-10
C944 16V10μ
R944 12
220V
50V
0V
1H
V902 ⚠
P16LNU10(HKA)(K)
23312814
C915 33μ250V
R941 3R15K
R942 3R15K
R913 1/2S1K
148
C916
G011 SHORT
Q911 2SC5360
9.5
C912 16V10μ
C913 0.01
D912 1SS133
D913 1SS133
9.2
R914 1K
R946 33
G013 SHORT
R911 100
D911 1SS133
Q913 2SC1815Y
2.9
2.3
R915 82
R949 91
R918 43
C914 680
R916 470
R948 OPEN
D972 OPEN
D914 OPEN
D971 OPEN
G012 OPEN
Q915 OPEN
C917 OPEN
D973 OPEN
C911 2KV 1000
V902A ⚠
Fo
Sc
TO FOCUS PACK
P916
P917
P912
M912
1P
Q920 2SA9335.Q
R994 2.7K
R997 3.3K
Q925 2SC1740S.Q
C930 16V47μ
R9708 1K
R998 1K
Q926 2SC1740S.Q
R999 1K
11P P915A
+200V
NC
DEF GND
HEATER
+9V
V ref
GND
B OUT
BLK
W/B
TO BLUE CRT-D (P915B)
220V
110V
0V
1H
L961 TRF4100AF
R961 820
C961 16V100μ
R963 2.2K
D962 1SS133
D961 1SS133
R962 390
C962 16V10μ
R965 470
R964 3.3K
Q961 2SC1815
Q962 2SA562TM-Y
D965 1SS133
R967 1.2K
R966 820
L962 TRF4479AC
R968 68
R969 10K
C963 0.01
R971 1.5KG
R973 680G
Q964 2SA1015Y
R970 2.2K
R972 470G
Q963 2SC1815Y
R974 680G
Q965 2SC1815Y
R975 2.4K
R976 5.6KG
Q966 2SA1015Y
R977 6.8KG
C964 M 0.1
R978 680G
D966 1SS133
C905 OPEN
R935 OPEN
ta1ou
R931 3R15K
R932 3R15K
R903 1/2S1K
V901 ⚠
P16LNU10(RFA)(K)
23312813
W/B
R9702
R936 33
G001 SHORT
C903 0.01
Q901 2SC5360
16.7
9.5
H
G1
G4
D
E
F
G
H
I
J


G
H
I
J
K
L
1
2
3
4
RZ01 39
QZ21 2SC2712Y or 2SC2412K
QZ20 2SC2712Y or 2SC2412K
33P
LZ20 PL-4.7
RZ02 1.5K
CZ03 25V0.1
RZ04 4.7K
RZ06 430
RZ07 1/8W330
RZ266 10K
CZ04 180P
CZ05 62P
CZ07 16V100μ
CZ08 25V0.1
RZ11 560
RZ13 3.9K
LZ09 TEM2122M
QZ23 2SA1162Y or 2SA1037K
CZ09 0.01
QZ24 2SC2712Y or 2SC2412K
RZ09 39
LZ96 PL-8.2J
LZ04 0
RZ10 1K
RZ12 1.8K
RZ14 12K
CZ96 27P
LZ05 TEM2122M
CZ10 16V100μ
Y-Comb
C-Comb
V-AV
RZ16 1K
QZ06 2SC2712Y or 2SC2412K
JZ01 0
RZ18 120
RZ265 1.5K
RZ17 1/8W180
ZZ11 OPEN
LZ212 OPEN
9V
LZ80 PL-1μ
CZ89 25V0.1
5V
LZ81 short
CZ90 25V0.1
CZ60 10V100μ
CZ332
RZ310 1.2K
RZ318 200K
RZ311 100
CZ331 680P
CZ328 CH560P
CZ343 0.1μ
RZ316 10K
CZ329 3.3μ
RZ314 1K
RZ312 100K
CZ327 16V10μ
RZ317 10K
RZ315 10K
CZ330 3900P
RZ313 82K
9 8 7 6 5 4 3 2 1
QZ32 MM1109XS
+5V
LZ309 0
QZ33 2SC2712Y
CZ338 16V10μ
RZ321 12K
RZ319 470
CZ336 0.1μ
CZ337 27P
RZ322 22K
RZ320 1.2K
LZ308 TEM2122M
RZ83 100
SDA1
SCL1
RZ84 100
CZ86 33P
CZ87 33P
RZ330 OPEN
RZ331 OPEN
QZ34 OPEN
RZ328 OPEN
RZ329 OPEN
CZ339 OPEN
CZ88 330P
CZ80 100P
CZ81 1μ
CZ82 33P
CZ91 33P
CZ84 1μ
RZ76 33
RZ77 33
QZ800 μPC29M33HB
1 2 3
CZ94 0.1
CZ93 0.1
CZ95 10V100μ
PZ01 15P
1 2 3 4 5 DH DC DE DD DB DG DA DF DI DJ
OPEN
OPEN
Y-Comb OPEN
OPEN
C-Comb GND
Comb through
9V
GND
V-AV
5V
fsc
SDA1
SCL1
TO SIGNAL


2SC2712Y
or
2SC2412K
LZ20
PL-4.7
RZ08
150
RZ246
1K
RZ266
10K
CZ04
180P
CZ05
62P
RZ07
1/8W330
QZ03
2SA1162Y
RZ245
22
RZ11
560
RZ13
3.9K
CZ59
1K
LZ21
PL-10J
RZ15
150
RZ244
1K
CZ09
0.01
QZ23
2SA1162Y
or
2SA1037K
LZ96
PL-8.2J
CZ58
56P
CZ57
180P
QZ02
2SA1162Y
RZ243
22
RZ12
1.8K
RZ14
12K
CZ96
27P
LZ05
TEM2122M
LZ03
TEM2122M
CZ10
16V100µ
CZ11
25V0.1
CZ12
39P
RZ20
1/8W820
CZ15
0.33µ
RZ22
22
AVDD
RZ16
1K
QZ06
2SC2712Y
or
2SC2412K
JZ01
0
RZ19
1.5K
RZ18
120
LZ22
PL-4.7J
QZ07
2SA1162Y
LZ310
OPEN
RZ265
1.5K
RZ17
1/8W180
ZZ11
OPEN
CZ13
120P
CZ14
150P
RZ21
270
LZ212
OPEN
RZ301
OPEN
RZ302
OPEN
RZ303
1K
RZ304
OPEN
CZ302
0.1µ
CZ304
OPEN
CZ301
0.1µ
CZ305
0.1µ
RZ323
27K
CZ345
1µ
RZ327
4.7K
CZ303
0.01
QZ37
2SC2412K
RZ310
1.2K
RZ311
100
CZ328
CH560P
CZ343
0.1µ
LZ307
0
RZ316
10K
CZ329
3.3µ
RZ314
1K
RZ312
100K
LZ306
TEM2122M
CZ327
16V10µ
RZ315
10K
CZ330
3900P
RZ313
82K
CZ335
0.01µ
RZ305
1.8K
CZ333
0.1µ
CZ334
82P
CZ307
16V10µ
LZ303
0
CZ306
0.1µ
LZ304
0
LZ305
TEM2122M
CZ308
0.1µ
QZ32
MM1109XS
+5V
CZ309
0.1µ
CZ310
0.1µ
CZ311
0.1µ
CZ312
330P
CZ344
0.1µ
CZ313
0.1µ
RZ324
10K
RZ325
10K
CZ314
0.1µ
CZ315
0.1µ
CZ316
10V100µ
CZ317
0.1µ
RZ307
3.9K
RZ306
1.8KF
A GND
CZ318
0.1µ
CZ319
0.1µ
CZ320
0.1µ
CZ321
0.1µ
RZ308
1K
LZ309
0
QZ33
2SC2712Y
CZ338
16V10µ
RZ321
12K
RZ319
470
CZ336
0.1µ
CZ337
27P
RZ322
22K
RZ320
1.2K
LZ308
TEM2122M
QZ01
TC9
MOD0
LMVDD
LMGND
ADT7
ADT6
ADT5
ADT4
ADT3
ADT2
ADT1
ADT0
DGND
FMI05
FSC8I
FSC80
FS
DVDD
PWM
CLMP
MOD1
MOD2
PLLCTL
DVDD
FSO
DGND
LPF
PLLGND
PLLVDD
CLPIN
VREFLY
VREFHY
BIAS
AINY
ADGND
ADVDD
AINC
ADGND
VREFLC
VREFHC
VB1
VREF
DAGN
YOUT
DAVDD
COUT
VB2
DGND
DVDD
RESET
PST0
PST1
PST2
PST3
PST4
PST5
PST6
PTT7
PST8
SDA1
SCL1
RZ83
100
RZ84
100
CZ86
33P
CZ87
33P
RZ330
OPEN
QZ34
OPEN
RZ331
OPEN
RZ328
OPEN
RZ329
OPEN
CZ339
OPEN
RZ76
33
RZ77
33
QZ800
µPC29M33HB
CZ95
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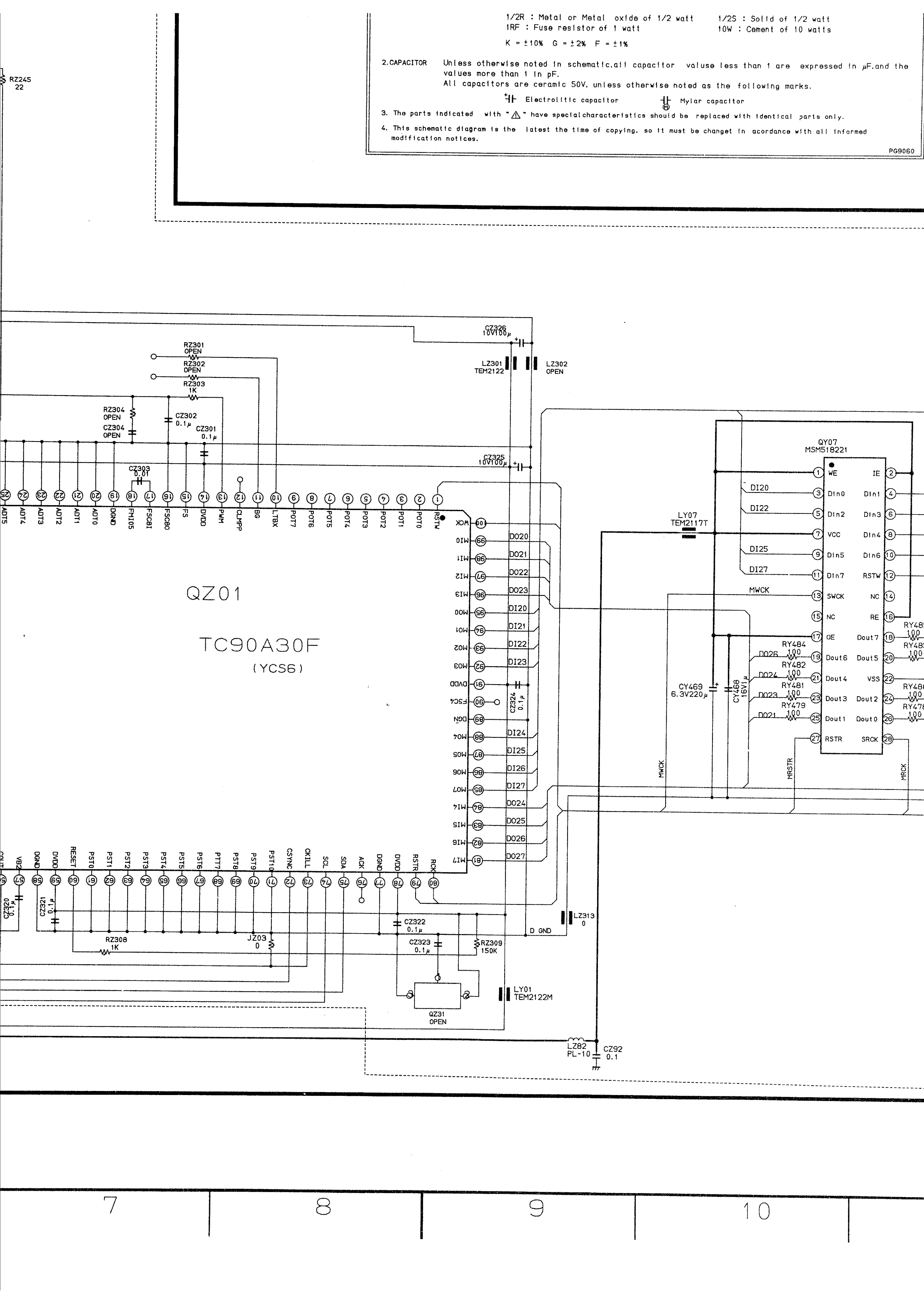
0.1
CZ93
0.1
LZ83
1µH
DJ
SCL1
4
5
6
7



1/2R : Metal or Metal oxide of 1/2 watt
1RF : Fuse resistor of 1 watt
1/2S : Solid of 1/2 watt
10W : Cement of 10 watts

K = ±10% G = ±2% F = ±1%

2.CAPACITOR Unless otherwise noted in schematic.all capacitor valuse less than 1 are expressed in μF.and the values more than 1 in pF.
All capacitors are ceramic 50V. unless otherwise noted as the following marks.

Electrolitic capacitor Mylar capacitor

3. The parts indicated with "⚠" have specialcharacteristics should be replaced with identical parts only.

4. This schematic diagram is the latest the time of copying. so it must be changet in acordance with all informed modification notices.

PG9060

RZ245
22
CZ326
10V100μ
LZ301
TEM2122
LZ302
OPEN
RZ301
OPEN
RZ302
OPEN
RZ303
1K
RZ304
OPEN
CZ304
OPEN
CZ302
0.1μ
CZ301
0.1μ
CZ303
0.01
CZ325
10V100μ
ADT5
ADT4
ADT3
ADT2
ADT1
ADT0
DGND
FMI05
FSC8I
FSC8O
FS
DVDD
PWM
CLMPP
BG
LTBX
POT7
POT6
POT5
POT4
POT3
POT2
POT1
POT0
RSTW
QZ01
TC90A30F
(YCS6)
WCK
MI0
MI1
MI2
MI3
MO0
MO1
MO2
MO3
DVDD
FSC4
DGN
MO4
MO5
MO6
MO7
MI4
MI5
MI6
MI7
DO20
DO21
DO22
DO23
DI20
DI21
DI22
DI23
CZ324
0.1μ
DI24
DI25
DI26
DI27
DO24
DO25
DO26
DO27
VB2
DGND
DVDD
RESET
PST0
PST1
PST2
PST3
PST4
PST5
PST6
PTT7
PST8
PST9
PST10
CSYNC
CKILL
SCL
SDA
ACK
DGND
DVDD
RSTR
RCK
CZ320
0.1μ
CZ321
0.1μ
RZ308
1K
JZ03
0
CZ322
0.1μ
CZ323
0.1μ
RZ309
150K
LZ313
0
D GND
QZ31
OPEN
LY01
TEM2122M
LZ82
PL-10
CZ92
0.1
LY07
TEM2117T
QY07
MSM518221
WE
IE
DI20
DIn0
DIn1
DI22
DIn2
DIn3
VCC
DIn4
DI25
DIn5
DIn6
DI27
DIn7
RSTW
MWCK
SWCK
NC
NC
RE
OE
Dout7
RY484
100
DO26
Dout6
Dout5
RY482
100
DO24
Dout4
VSS
RY481
100
DO23
Dout3
Dout2
RY479
100
DO21
Dout1
Dout0
RSTR
SRCK
CY469
6.3V220μ
CY468
16V1μ
MWCK
MRSTR
MRCK
7
8
9
10

ess than 1 are expressed in µF.and the

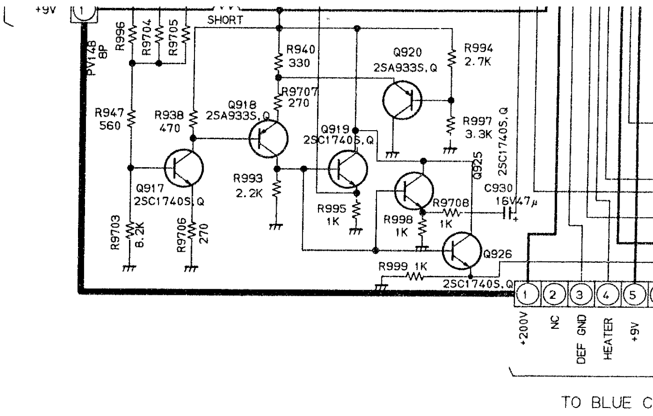
e following marks.

citor

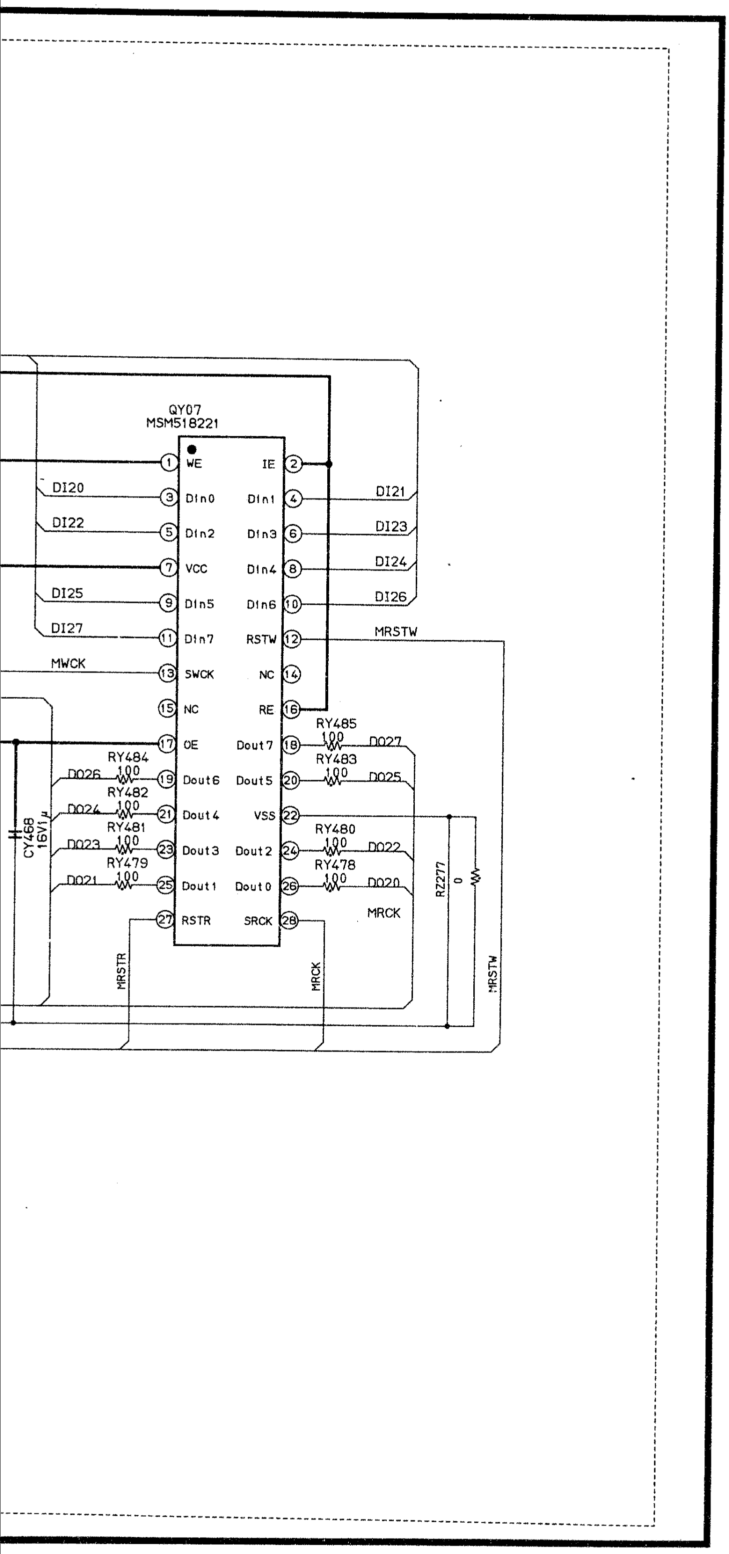
d with identical parts only.

et in accordance with all informed

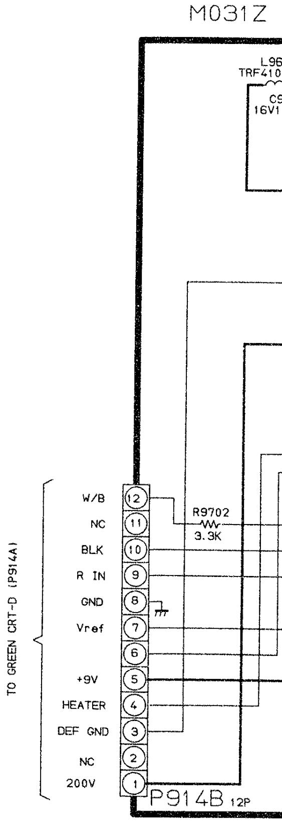
PG9060



+9V
PV14B 8P
R996
R9704
R9705
SHORT
R940 330
Q920 2SA933S.Q
R994 2.7K
R9707 270
Q918 2SA933S.Q
R947 560
R938 470
R997 3.3K
Q919 2SC1740S.Q
Q925 2SC1740S.Q
Q917 2SC1740S.Q
R993 2.2K
C930 16V47µ
R9708 1K
R995 1K
R998 1K
R9703 8.2K
R9706 270
Q926
R999 1K
2SC1740S.Q
1 2 3 4 5
+200V
NC
DEF GND
HEATER
+9V
TO BLUE C

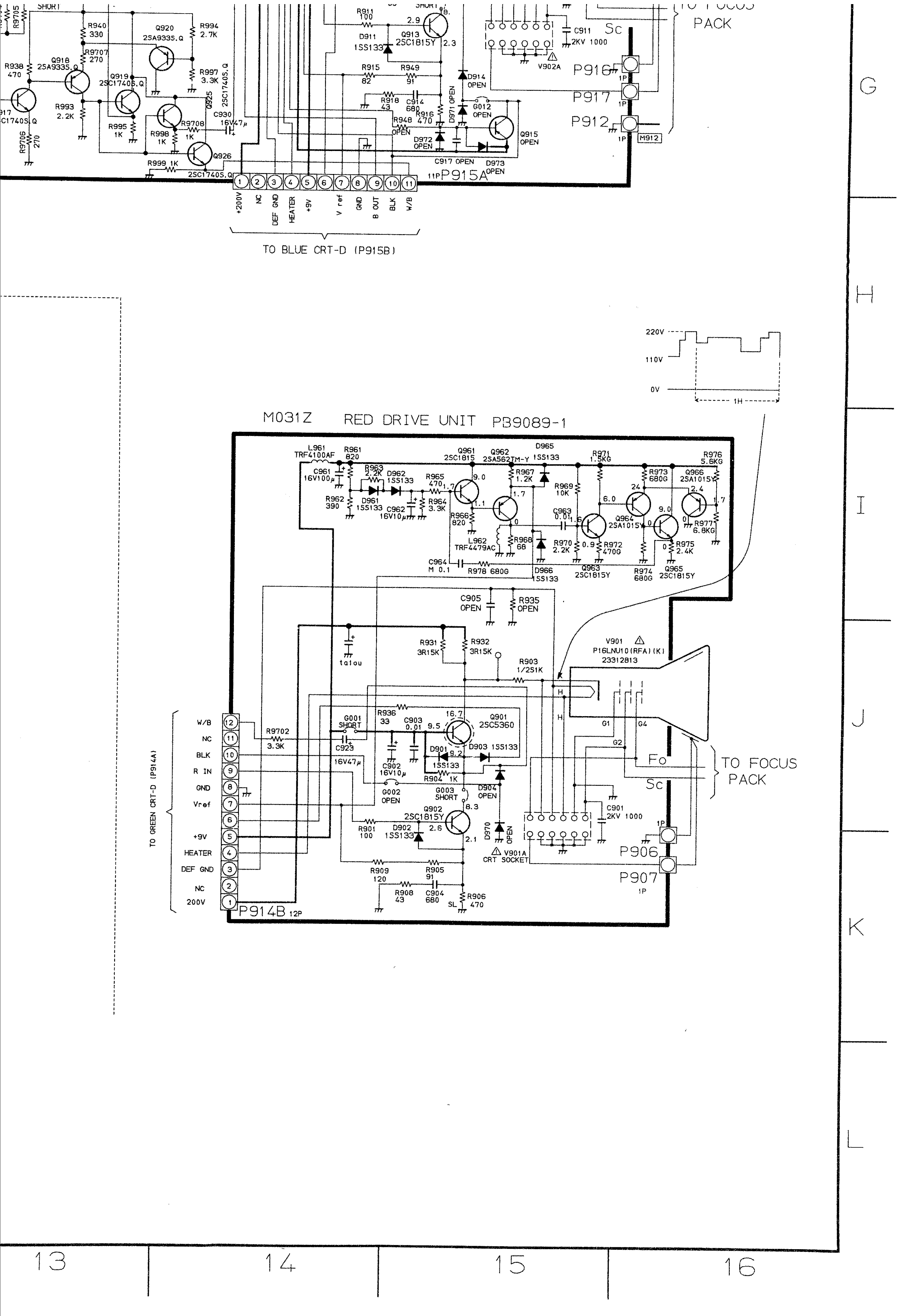


QY07
MSM518221
1 WE
2 IE
3 Din0
4 Din1
5 Din2
6 Din3
7 VCC
8 Din4
9 Din5
10 Din6
11 Din7
12 RSTW
13 SWCK
14 NC
15 NC
16 RE
17 OE
18 Dout7
19 Dout6
20 Dout5
21 Dout4
22 VSS
23 Dout3
24 Dout2
25 Dout1
26 Dout0
27 RSTR
28 SRCK
DI20
DI21
DI22
DI23
DI24
DI25
DI26
DI27
MRSTW
MWCK
RY485 100
DO27
RY484 100
DO26
RY483 100
DO25
RY482 100
DO24
RY481 100
DO23
RY480 100
DO22
RY479 100
DO21
RY478 100
DO20
CY468 16V1µ
RZ277 0
MRCK
MRSTR
MRCK
MRSTW



M031Z
L96
TRF410
C9
16V1
TO GREEN CRT-D (P914A)
12 W/B
11 NC
10 BLK
9 R IN
8 GND
7 Vref
6
5 +9V
4 HEATER
3 DEF GND
2 NC
1 200V
R9702 3.3K
P914B 12P

10 11 12 13 14


M031Z RED DRIVE UNIT P39089-1
TO BLUE CRT-D (P915B)
P915A 11P
+200V
NC
DEF GND
HEATER
+9V
V ref
GND
B OUT
BLK
W/B
Q918 2SA9335.Q
Q919 2SC1740S.Q
Q920 2SA9335.Q
Q925 2SC1740S.Q
Q926 2SC1740S.Q
R940 330
R9707 270
R994 2.7K
R997 3.3K
R938 470
R993 2.2K
R995 1K
R998 1K
R9708 1K
R9706 270
R999 1K
C930 16V47μ
R911 100
Q913 2SC1815Y
D911 1SS133
R915 82
R949 91
R918 43
C914 680
R916 470
R948 OPEN
D914 OPEN
D971 OPEN
G012 OPEN
Q915 OPEN
D972 OPEN
C917 OPEN
D973 OPEN
C911 2KV 1000
V902A
Sc
PACK
P916
P917
P912
M912
220V
110V
0V
1H
L961 TRF4100AF
R961 820
C961 16V100μ
R963 2.2K
D962 1SS133
R962 390
D961 1SS133
C962 16V10μ
R965 470
R964 3.3K
Q961 2SC1815
Q962 2SA562TM-Y
D965 1SS133
R967 1.2K
R966 820
L962 TRF4479AC
R968 68
R969 10K
C963 0.01
R970 2.2K
R971 1.5KG
Q963 2SC1815Y
R972 470G
Q964 2SA1015Y
R973 680G
R974 680G
Q965 2SC1815Y
R975 2.4K
Q966 2SA1015Y
R976 5.6KG
R977 6.8KG
C964 M 0.1
R978 680G
D966 1SS133
C905 OPEN
R935 OPEN
R931 3R15K
R932 3R15K
R903 1/2S1K
V901 P16LNU10(RFA)(K) 23312813
G1
G2
G4
Fo
Sc
TO FOCUS PACK
C901 2KV 1000
V901A CRT SOCKET
P906
P907
1P
R936 33
G001 SHORT
C923 16V47μ
R9702 3.3K
C903 0.01
Q901 2SC5360
D901 1SS133
D903 1SS133
C902 16V10μ
R904 1K
G002 OPEN
G003 SHORT
D904 OPEN
Q902 2SC1815Y
R901 100
D902 1SS133
D970 OPEN
R909 120
R905 91
R908 43
C904 680
R906 470
SL
talou
P914B 12P
TO GREEN CRT-D (P914A)
W/B
NC
BLK
R IN
GND
Vref
+9V
HEATER
DEF GND
NC
200V
G
H
I
J
K
L
13
14
15
16

SCHEMATIC DIAGRAM MODEL : 50N9UXE / 50N9UXH 50N9UXA / 50N9UXM (5/6)

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 3. Do not degrade the safety of the receiver through improper servicing.

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position. Set other controls for best picture.

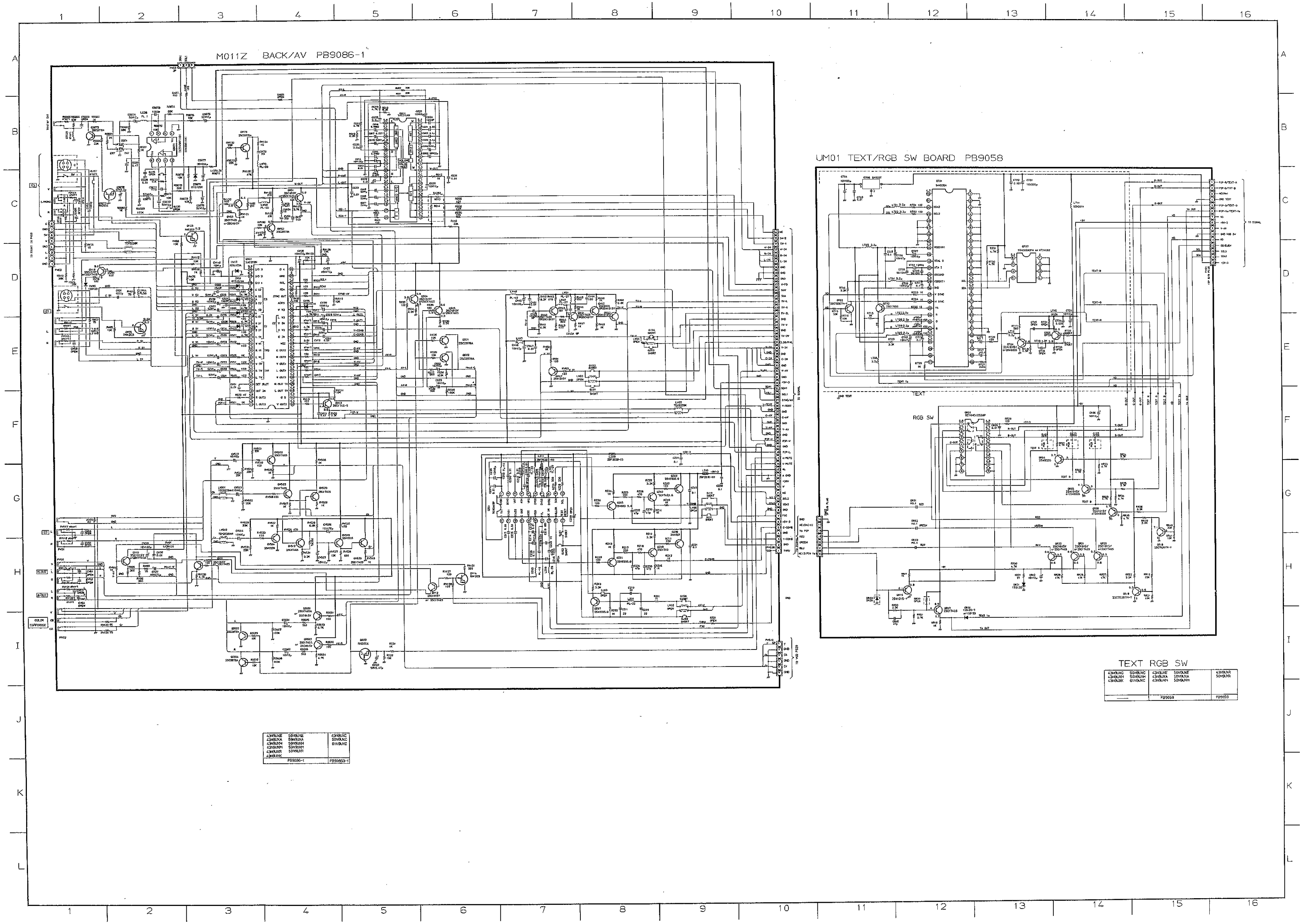
NOTES:

1. D.C. resistance value of a principal transformer is shown in this schematic diagram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH, and the values less than 1 in H.

040-9909



43N9UXE 50N9UXE 43N9UXA 50N9UXA 43N9UXH 50N9UXH 43N9UXM 50N9UXM 43N9UXR 50N9UXR 43N9UXK	43N9UXC 50N9UXC 61N9UXC
PB9086-1	PB9086D-1

TEXT RGB SW

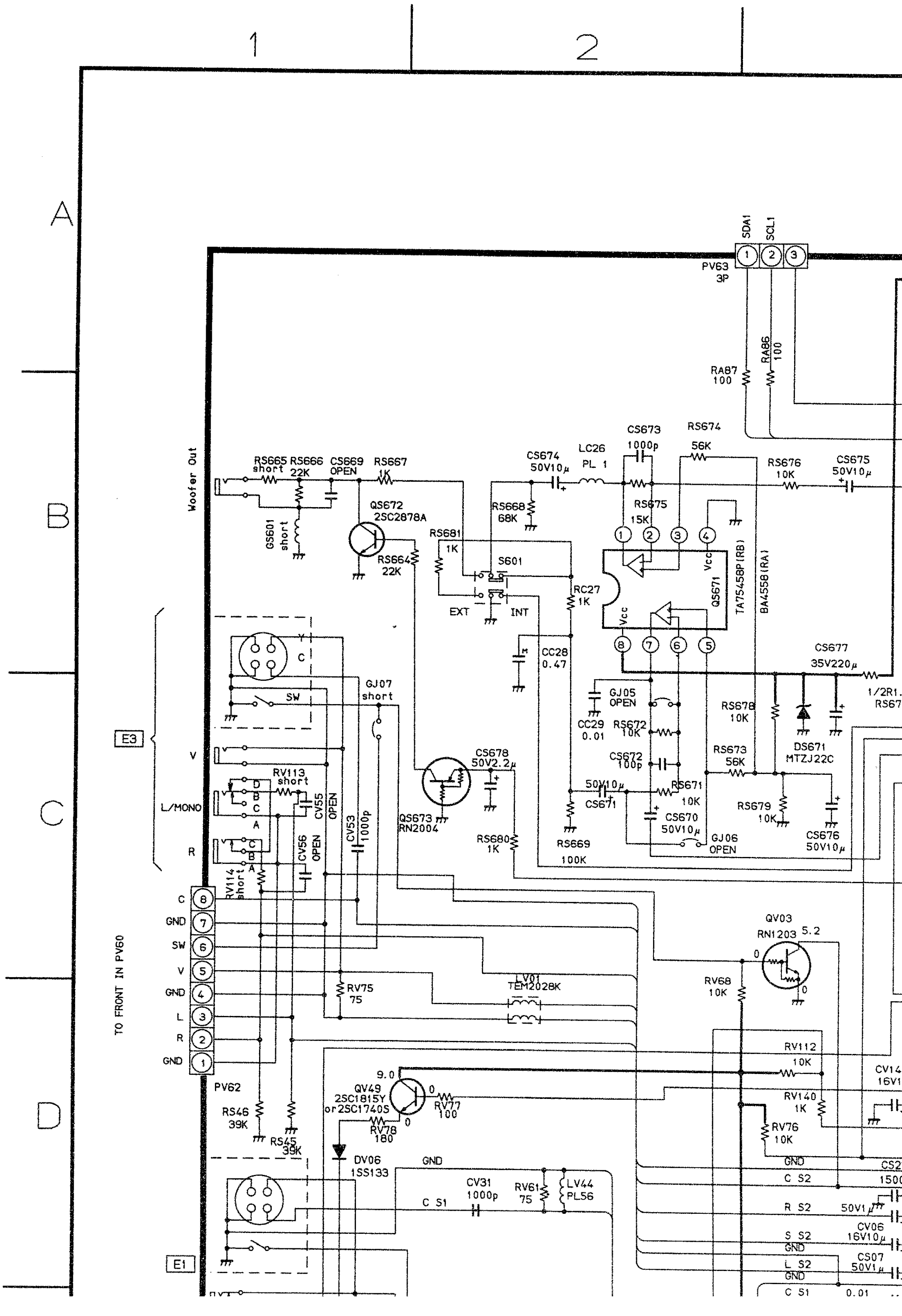
43N9UXC 50N9UXC 43N9UXH 50N9UXH 43N9UXK 61N9UXC	43N9UXE 50N9UXE 43N9UXA 50N9UXA 43N9UXM 50N9UXM	43N9UXR 50N9UXR
—	PB9058	PB9059

SCHEMATIC DIAGRAM MODEL : 50N9UXE / 50N9UX

50N9UXA / 50N9UX

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate com ponents which have special characteristics important for safety and should be replaced only with types ident those in the original circuit or specified in the parts list. The mounting position of replacements is to be identi with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE o 3. Do not degrade the safety of the receiver through improper servicing.

040-9909


1
2
A
B
C
D
SDA1
SCL1
PV63
3P
RA87
100
RA86
100
Woofer Out
RS665 short
RS666 22K
CS669 OPEN
RS667 1K
GS601 short
QS672 2SC2878A
RS664 22K
RS681 1K
S601
EXT
INT
CS674 50V10μ
LC26 PL 1
RS668 68K
CS673 1000p
RS675 15K
RS674 56K
RC27 1K
CC28 0.47
QS671
TA75458P(RB)
BA4558(RA)
Vcc
RS676 10K
CS675 50V10μ
CS677 35V220μ
GJ07 short
GJ05 OPEN
CC29 0.01
RS672 10K
CS672 100p
RS678 10K
DS671 MTZJ22C
RS673 56K
CS678 50V2.2μ
QS673 RN2004
RS680 1K
RS669 100K
CS671
RS671 10K
CS670 50V10μ
GJ06 OPEN
RS679 10K
CS676 50V10μ
1/2R1.
RS67
E3
C
SW
V
L/MONO
R
RV113 short
CV55 OPEN
CV53 1000p
CV56 OPEN
RV114 short
TO FRONT IN PV60
C
GND
SW
V
GND
L
R
GND
PV62
RV75 75
LV01 TEM2028K
QV03 RN1203
5.2
RV68 10K
RS46 39K
RS45 39K
9.0
QV49 2SC1815Y or 2SC1740S
RV77 100
RV78 180
DV06 1SS133
GND
CV31 1000p
C S1
RV61 75
LV44 PL56
RV112 10K
RV140 1K
RV76 10K
CV14 16V1
GND
C S2
R S2
S S2
GND
L S2
GND
C S1
50V1μ
CV06 16V10μ
CS07 50V1μ
0.01
CS2 150
E1

50N9UXH (5/6)

/ 50N9UXM

st designate com-
/ with types identical to
nts is to be identical
FETY NOTICE on page

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line volta volts, colour bar signal. Voltages reading may vary ±20%.
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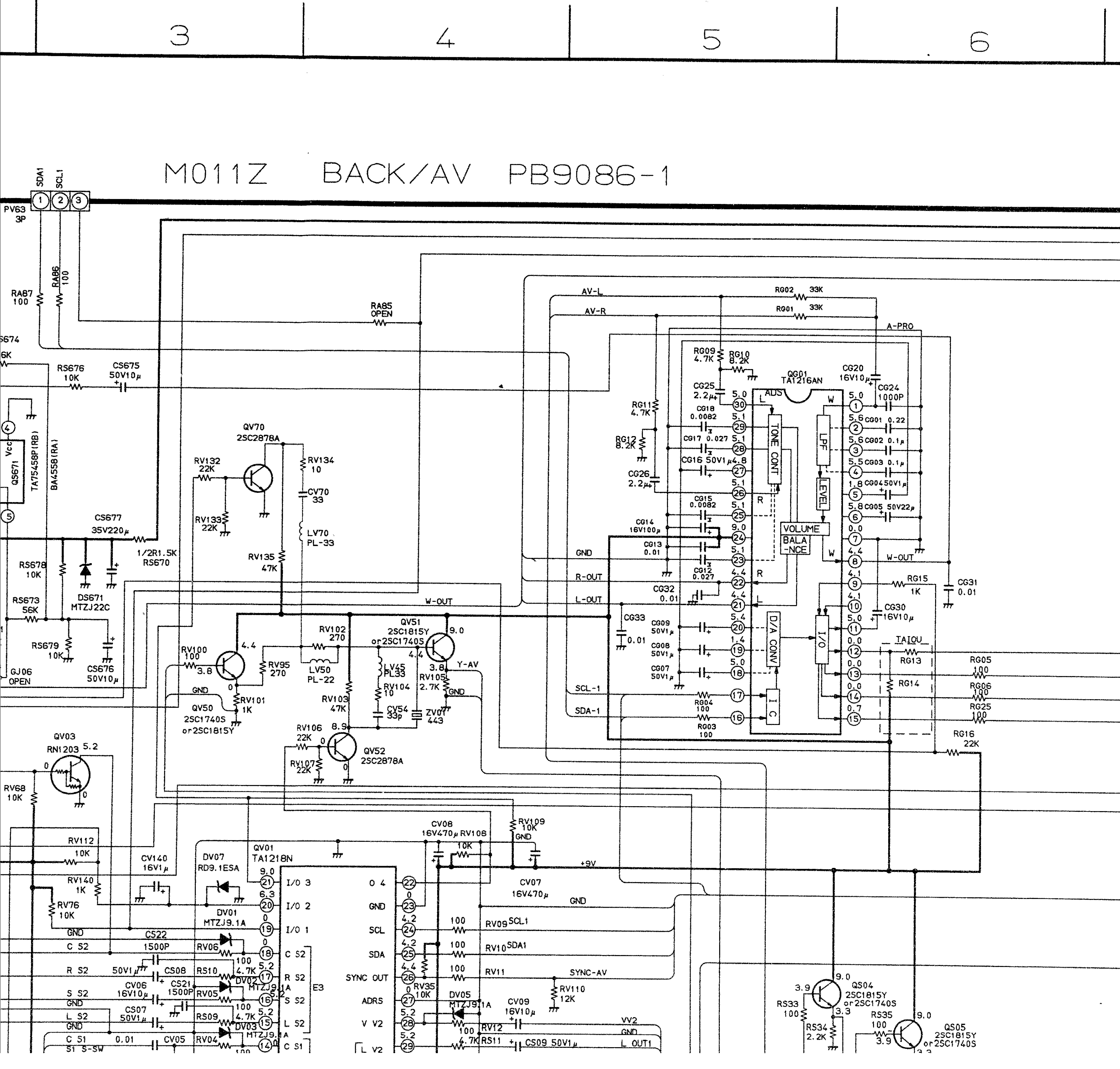
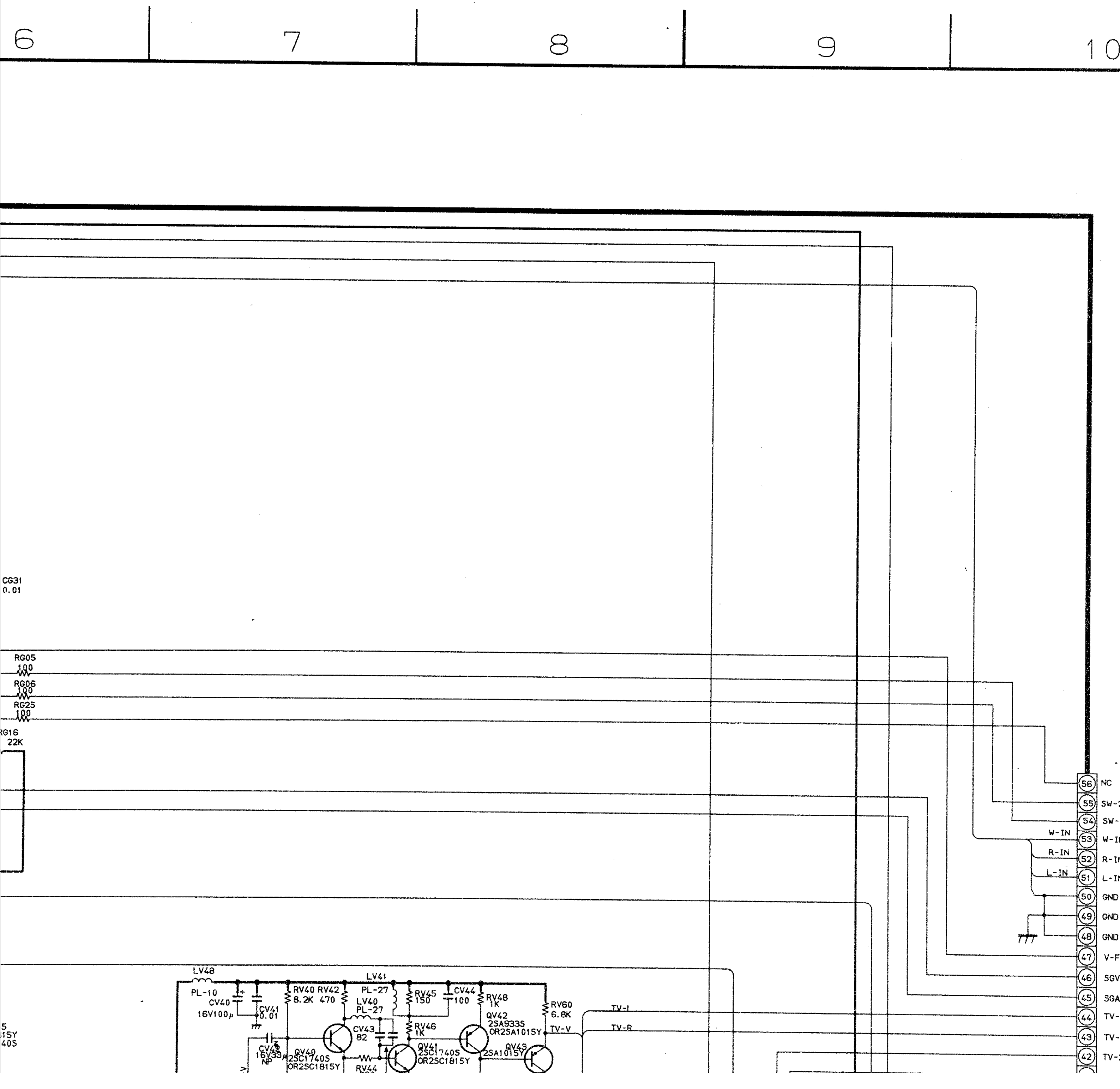

3
4
5
6
M011Z BACK/AV PB9086-1
SDA1
SCL1
PV63 3P
RA87 100
RA86 100
RA85 OPEN
RS676 10K
CS675 50V10μ
Q5671
TA75458P(RB)
BA4558(RA)
Vcc
CS677 35V220μ
1/2R1.5K RS670
RS678 10K
DS671 MTZJ22C
RS673 56K
RS679 10K
CS676 50V10μ
GJ06 OPEN
QV70 2SC2878A
RV132 22K
RV133 22K
RV134 10
CV70 33
LV70 PL-33
RV135 47K
RV100 100
RV95 270
RV101 1K
QV50 2SC1740S or 2SC1815Y
RV102 270
LV50 PL-22
W-OUT
QV51 2SC1815Y or 2SC1740S
LV45 PL33
RV104 10
CV54 33p
ZV01 443
RV105 2.7K
Y-AV
RV103 47K
RV106 22K
RV107 22K
QV52 2SC2878A
QV03 RN1203
RV68 10K
RV112 10K
RV140 1K
RV76 10K
CV140 16V1μ
DV07 RD9.1ESA
DV01 MTZJ9.1A
QV01 TA1218N
I/O 3
I/O 2
I/O 1
C S2
R S2
S S2
L S2
C S1
E3
O 4
GND
SCL
SDA
SYNC OUT
ADRS
V V2
L V2
C522 1500P
CV06 16V10μ
CS08
CS21 1500P
CS07 50V1μ
CV05
RV06
RV05
RV04
RS10
RS09
DV02 MTZJ9.1A
DV03 MTZJ9.1A
RV09 SCL1
RV10 SDA1
RV11
SYNC-AV
RV35 10K
DV05 MTZJ9.1A
CV09 16V10μ
RV110 12K
RV12 4.7K
RS11
CS09 50V1μ
L OUT1
VV2
CV08 16V470μ
RV108 10K
RV109 10K
CV07 16V470μ
+9V
AV-L
AV-R
RG02 33K
RG01 33K
A-PRO
RG09 4.7K
RG10 8.2K
QG01 TA1216AN
CG20 16V10μ
CG24 1000P
CG25 2.2μ
RG11 4.7K
RG12 8.2K
CG26 2.2μ
CG18 0.0082
CG17 0.027
CG16 50V1μ
CG15 0.0082
CG14 16V100μ
CG13 0.01
CG12 0.027
CG32 0.01
CG33 0.01
CG09 50V1μ
CG08 50V1μ
CG07 50V1μ
RG04 100
RG03 100
ADS
TONE CONT
LPF
LEVEL
VOLUME
BALA-NCE
D/A CONV
I/O
I C
CG01 0.22
CG02 0.1μ
CG03 0.1μ
CG04 50V1μ
CG05 50V22μ
GND
R-OUT
L-OUT
SCL-1
SDA-1
W-OUT
RG15 1K
CG31 0.01
CG30 16V10μ
TAIOU
RG13
RG14
RG05 100
RG06 100
RG25 100
RG16 22K
QS04 2SC1815Y or 2SC1740S
RS33 100
RS34 2.2K
RS35 100
QS05 2SC1815Y or 2SC1740S

round, line voltage 220
%.
d a low capacity probe.

e in mid position and
other controls for best

NOTES:

1. D.C. resistance value of a principal transformer is shown in t gram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.

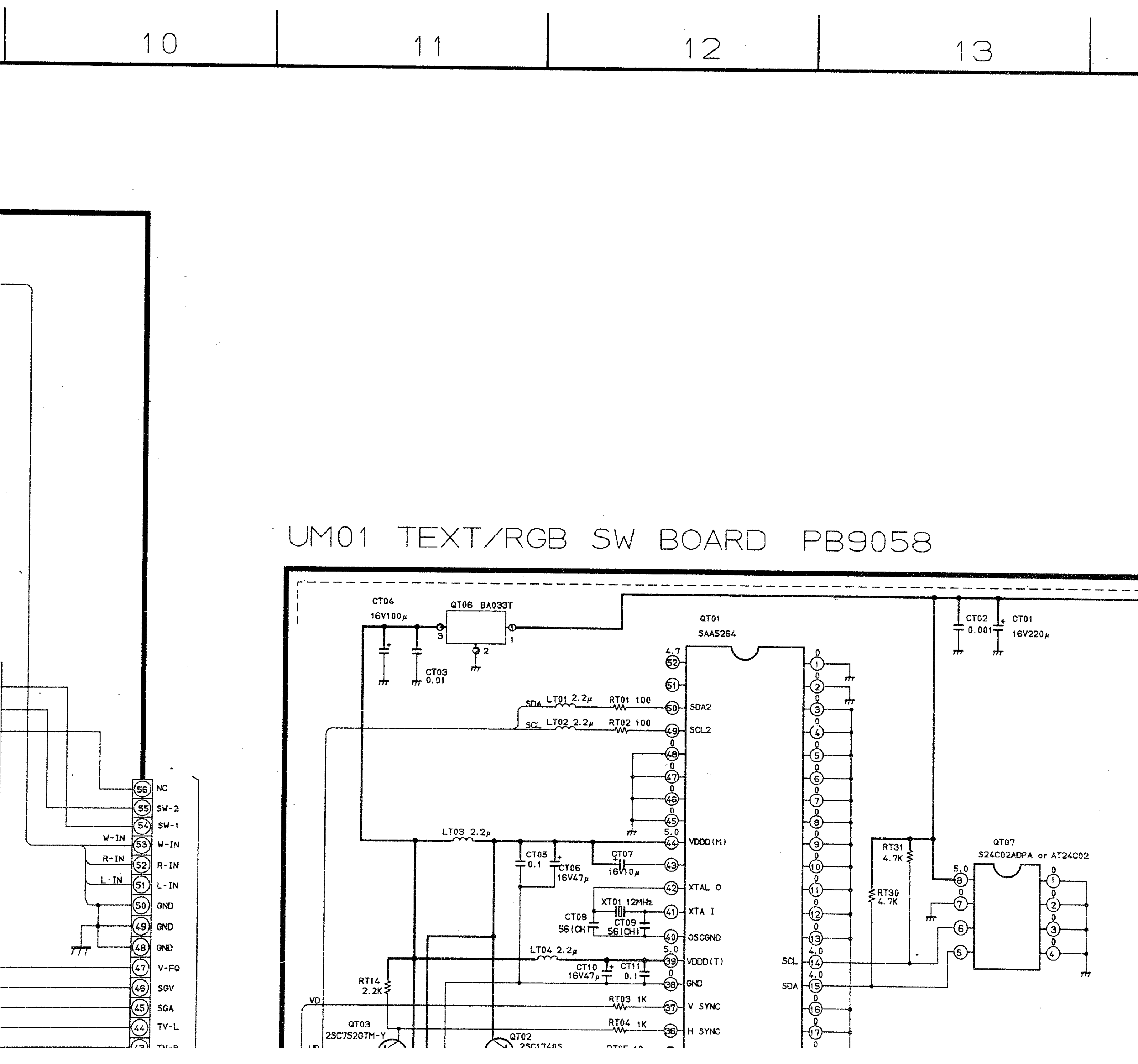

6
7
8
9
10
CG31
0.01
RG05
100
RG06
100
RG25
100
RG16
22K
5
15Y
40S
LV48
PL-10
CV40
16V100μ
CV41
0.01
RV40
8.2K
RV42
470
LV41
PL-27
LV40
PL-27
CV43
82
RV45
150
CV44
100
RV46
1K
RV48
1K
RV60
6.8K
CV42
16V33μ
NP
QV40
2SC1740S
OR2SC1815Y
RV44
QV41
2SC1740S
OR2SC1815Y
QV42
2SA933S
OR2SA1015Y
QV43
2SA1015Y
TV-V
TV-I
TV-R
W-IN
R-IN
L-IN
56
NC
55
SW-
54
SW-
53
W-I
52
R-I
51
L-I
50
GND
49
GND
48
GND
47
V-F
46
SGV
45
SGA
44
TV-
43
TV-
42
TV-

ner is shown in this schematic dia-
the circuit.
ice.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTO

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor v
   sed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor val
   sed in μH, and the values less than 1 in H.

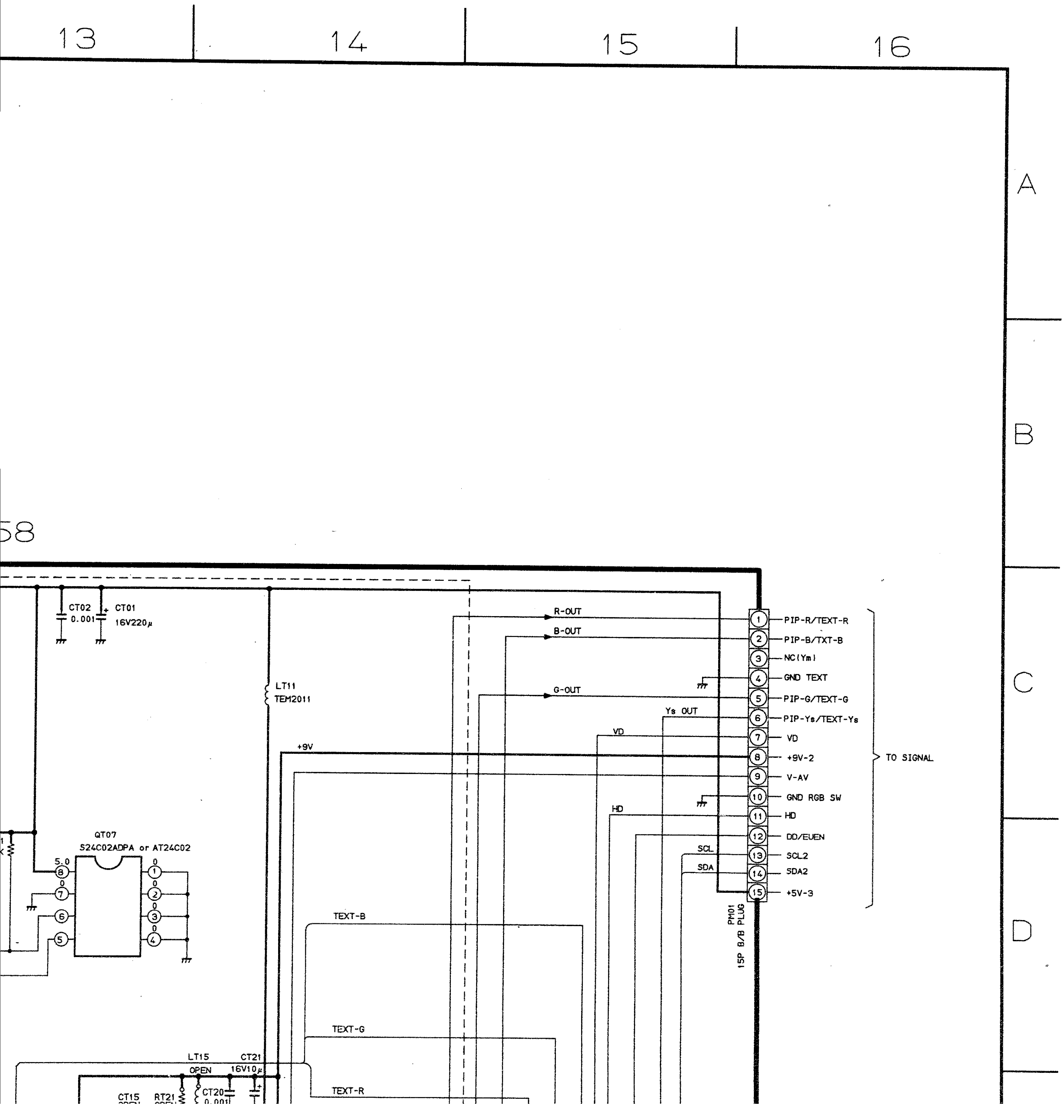

10
11
12
13
UM01 TEXT/RGB SW BOARD PB9058
CT04 16V100μ
QT06 BA033T
CT03 0.01
QT01 SAA5264
CT02 0.001
CT01 16V220μ
SDA LT01 2.2μ RT01 100
SCL LT02 2.2μ RT02 100
SDA2
SCL2
LT03 2.2μ
CT05 0.1
CT06 16V47μ
CT07 16V10μ
VDDD(M)
XTAL O
XT01 12MHz
XTA I
CT08 56(CH)
CT09 56(CH)
OSCGND
LT04 2.2μ
CT10 16V47μ
CT11 0.1
VDDD(T)
GND
RT14 2.2K
RT03 1K
V SYNC
RT04 1K
H SYNC
VD
QT03 2SC752GTM-Y
QT02 2SC1740S
RT31 4.7K
RT30 4.7K
QT07 S24C02ADPA or AT24C02
SCL
SDA
NC
SW-2
SW-1
W-IN
R-IN
L-IN
GND
GND
GND
V-FQ
SGV
SGA
TV-L

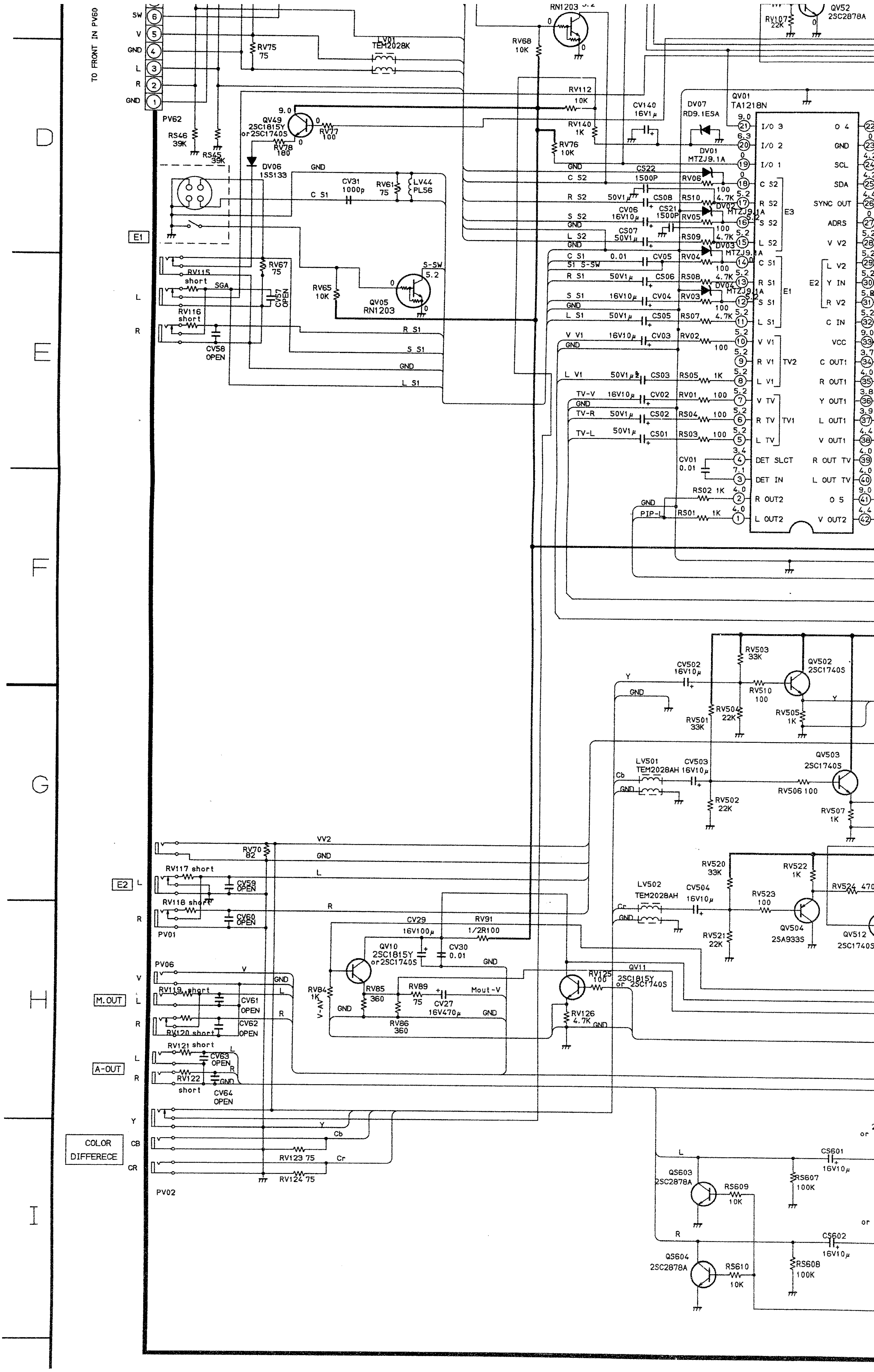
CITOR and INDUCTOR

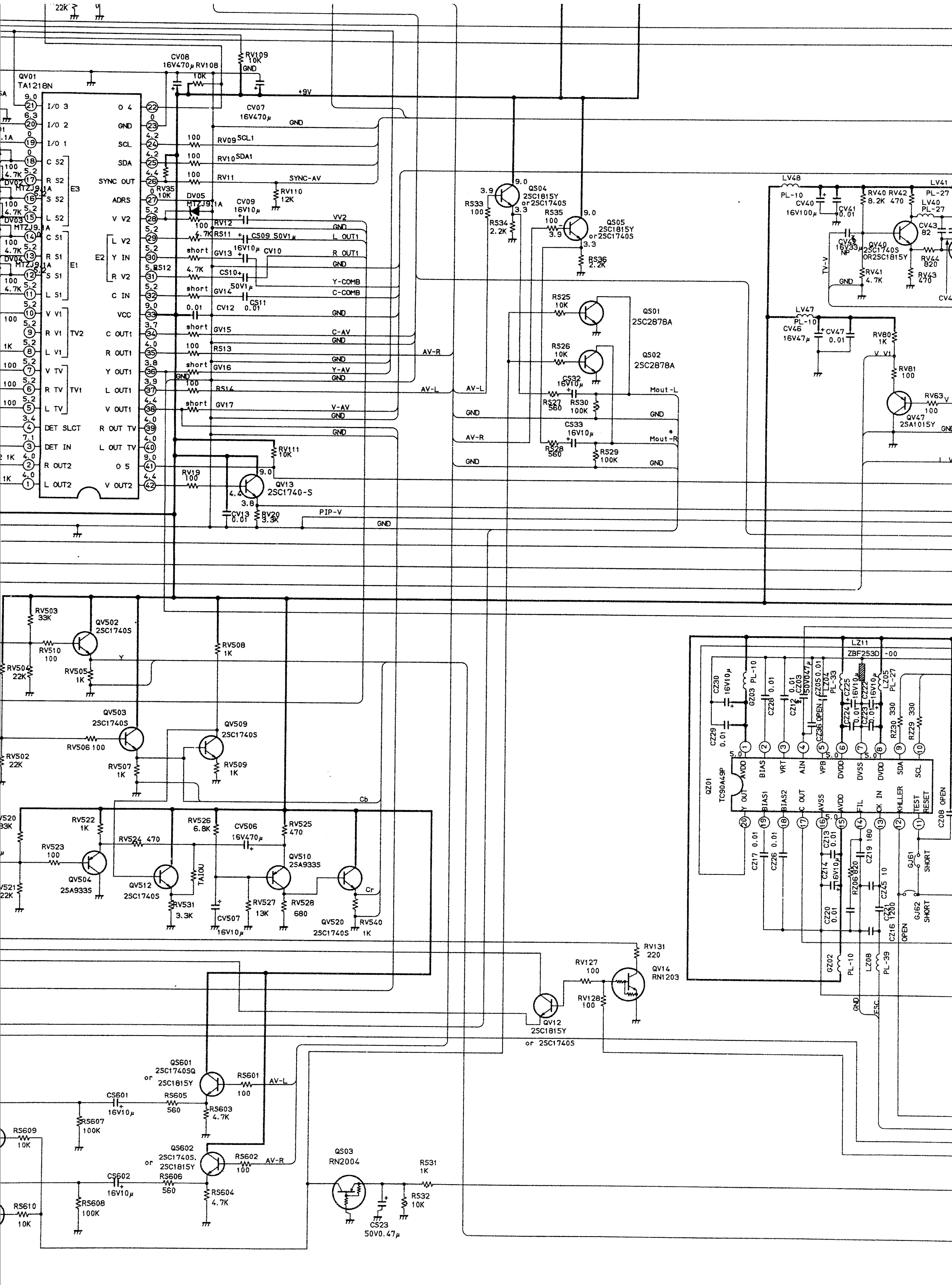
=1,000, M=1,000,000

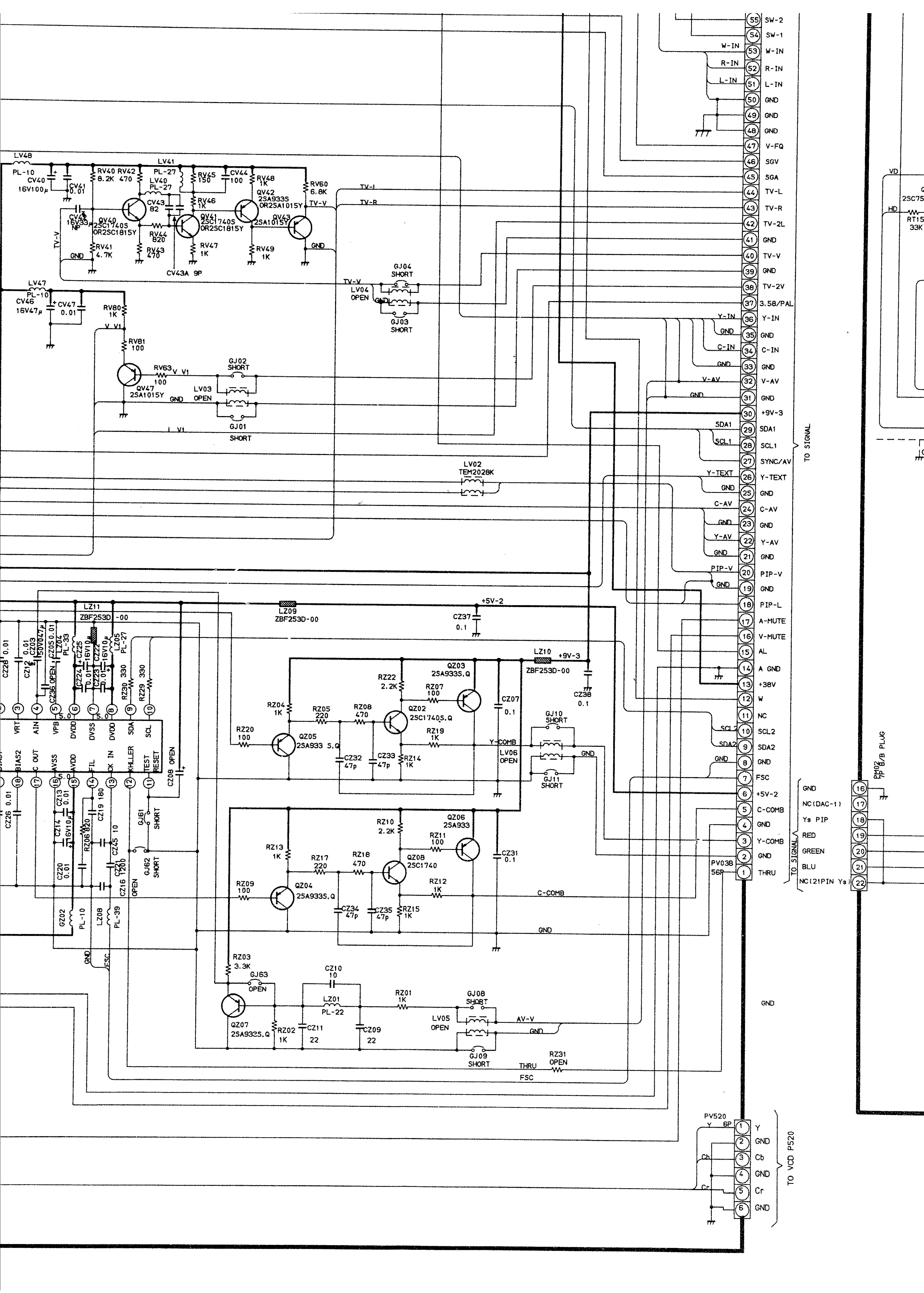
hematic, all capacitor values less than 1 are expres-
than 1 in pF.

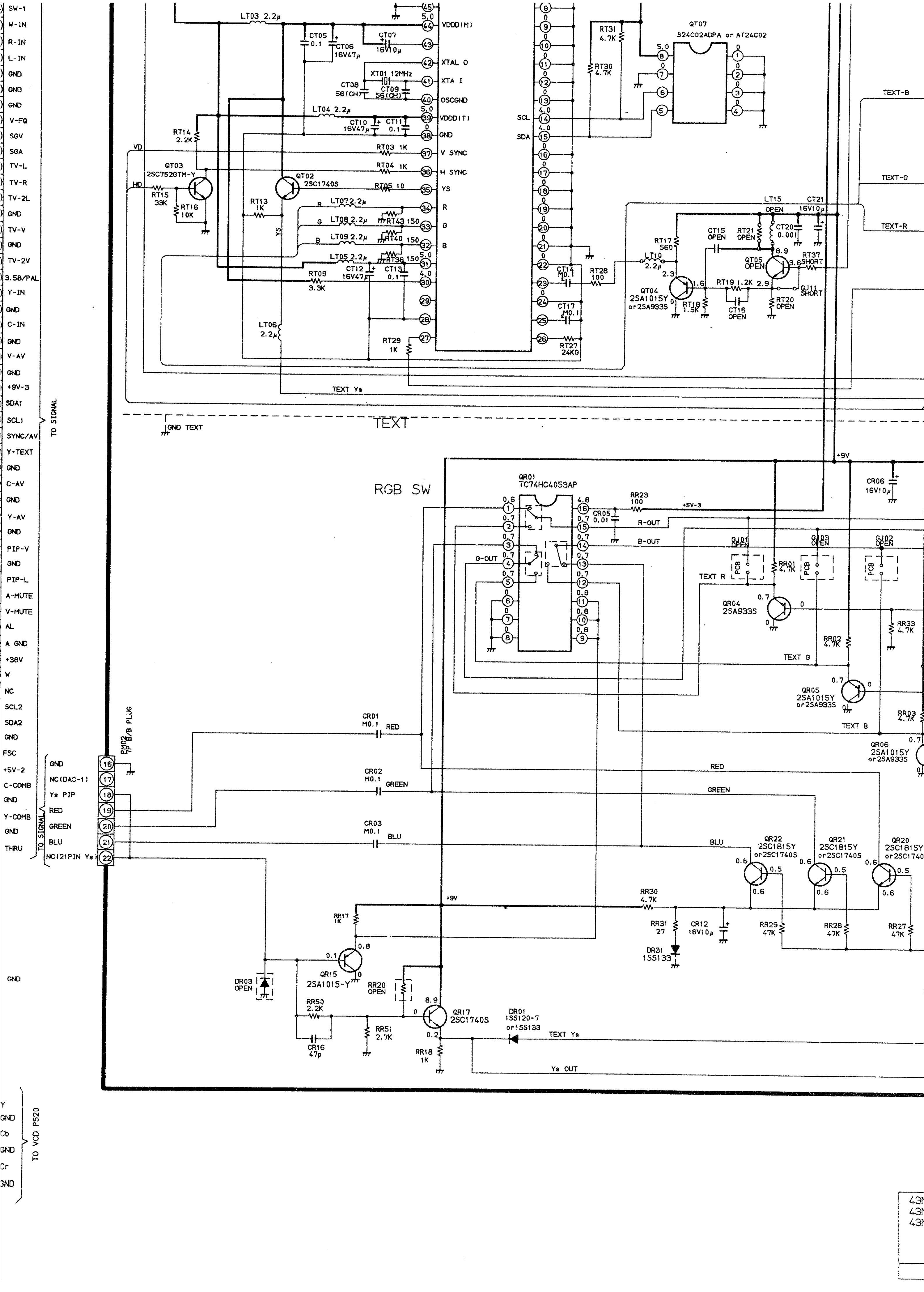
hematic, all inductor values more than 1 are expres-
than 1 in H.

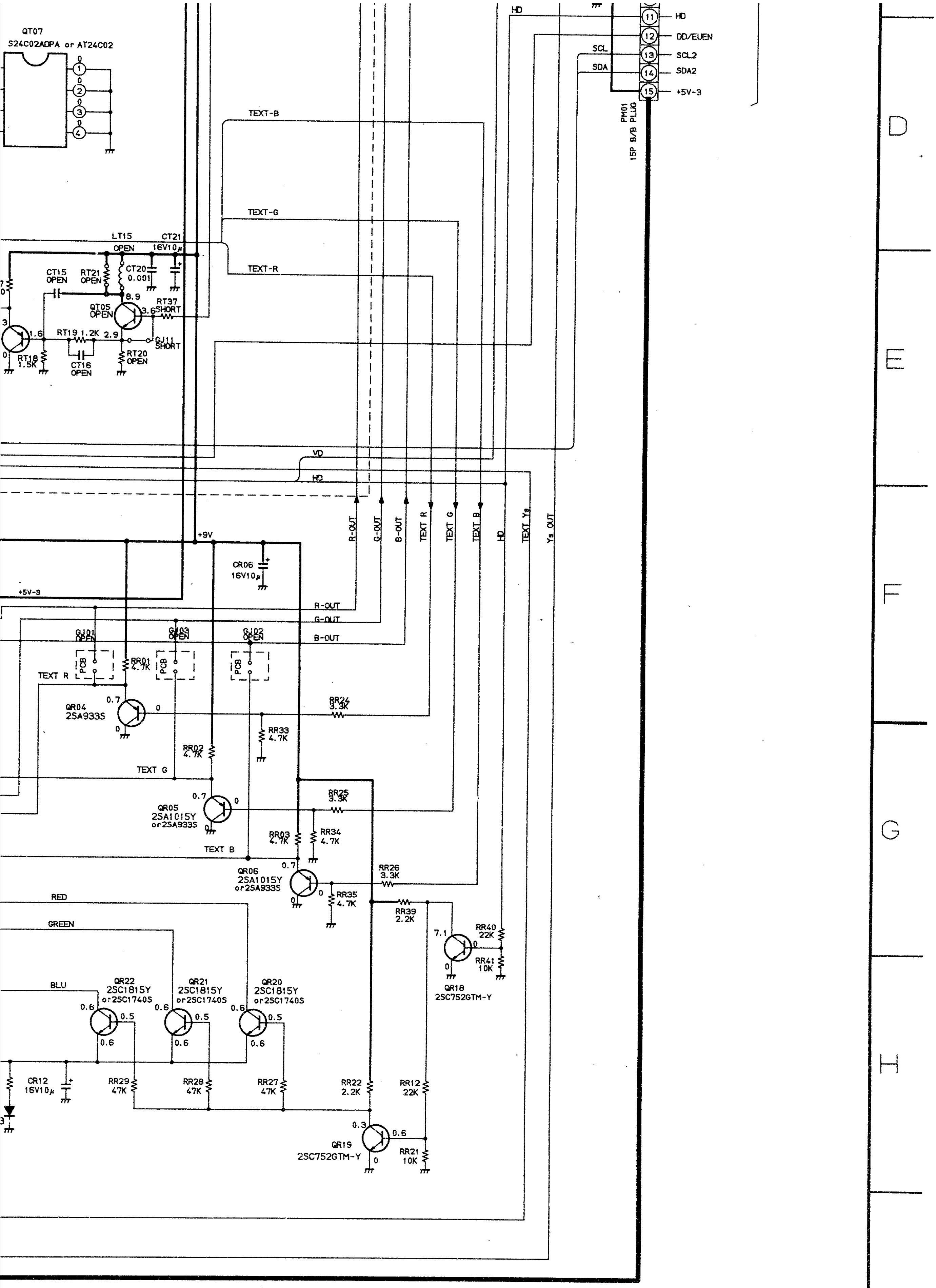

13
14
15
16
A
B
C
D
58
CT02
0.001
CT01
16V220μ
LT11
TEM2011
R-OUT
B-OUT
G-OUT
Ys OUT
VD
+9V
HD
SCL
SDA
PIP-R/TEXT-R
PIP-B/TXT-B
NC(Ym)
GND TEXT
PIP-G/TEXT-G
PIP-Ys/TEXT-Ys
VD
+9V-2
V-AV
GND RGB SW
HD
DD/EVEN
SCL2
SDA2
+5V-3
TO SIGNAL
PM01
15P B/B PLUG
QT07
S24C02ADPA or AT24C02
5.0
0
TEXT-B
TEXT-G
TEXT-R
LT15
OPEN
CT21
16V10μ
CT15
RT21
CT20
0.001


TO FRONT IN PV60
SW
V
GND
L
R
GND
PV62
RS46 39K
RS45 39K
RV75 75
LV01 TEM2028K
RN1203
RV68 10K
QV52 2SC2878A
RV107 22K
RV112 10K
RV140 1K
CV140 16V1μ
DV07 RD9.1ESA
QV01 TA1218N
QV49 2SC1815Y or 2SC1740S
RV77 100
RV78 180
RV76 10K
DV06 1SS133
DV01 MTZJ9.1A
GND
CV31 1000p
RV61 75
LV44 PL56
C S1
C S2
R S2
S S2
L S2
CS22 1500P
CS08
CS21 1500P
CV06 16V10μ
CS07 50V1μ
RV06
RS10
RV05
RS09
DV02 MTZJ9.1A
DV03 MTZJ9.1A
DV04 MTZJ9.1A
E1
E2
E3
TV1
TV2
I/O 3
I/O 2
I/O 1
C S2
R S2
S S2
L S2
C S1
R S1
S S1
L S1
V V1
R V1
L V1
V TV
R TV
L TV
DET SLCT
DET IN
R OUT2
L OUT2
O 4
GND
SCL
SDA
SYNC OUT
ADRS
V V2
L V2
Y IN
R V2
C IN
VCC
C OUT1
R OUT1
Y OUT1
L OUT1
V OUT1
R OUT TV
L OUT TV
O 5
V OUT2
RV115 short
RV116 short
SGA
RV67 75
CV57 OPEN
CV58 OPEN
RV65 10K
QV05 RN1203
S-SW 5.2
R S1
S S1
GND
L S1
S1 S-SW
CV05
CS06
CV04
CS05
CV03
CS03
CV02
CS02
CS01
CV01 0.01
RV04
RS08
RV03
RS07
RV02
RS05 1K
RV01 100
RS04 100
RS03 100
RS02 1K
RS01 1K
TV-V
TV-R
TV-L
PIP-L
Y
CV502 16V10μ
RV503 33K
QV502 2SC1740S
RV510 100
RV504 22K
RV501 33K
RV505 1K
QV503 2SC1740S
LV501 TEM2028AH
CV503 16V10μ
Cb
RV506 100
RV502 22K
RV507 1K
RV520 33K
RV522 1K
RV524 470
LV502 TEM2028AH
CV504 16V10μ
Cr
RV523 100
QV504 2SA933S
RV521 22K
QV512 2SC1740S
VV2
RV70 82
E2
RV117 short
CV59 OPEN
RV118 short
CV60 OPEN
PV01
CV29 16V100μ
RV91 1/2R100
QV10 2SC1815Y or 2SC1740S
CV30 0.01
PV06
M.OUT
RV119 short
CV61 OPEN
RV120 short
CV62 OPEN
RV84 1K
V-AV
RV85 360
RV89 75
CV27 16V470μ
Mout-V
RV86 360
QV11 2SC1815Y or 2SC1740S
RV125 100
RV126 4.7K
A-OUT
RV121 short
CV63 OPEN
RV122 short
CV64 OPEN
COLOR DIFFERECE
Y
CB
CR
RV123 75
RV124 75
PV02
CS601 16V10μ
RS607 100K
QS603 2SC2878A
RS609 10K
CS602 16V10μ
RS608 100K
QS604 2SC2878A
RS610 10K
D
E
F
G
H
I


QV01
TA1218N
I/O 3
I/O 2
I/O 1
C S2
R S2
S S2
L S2
C S1
R S1
S S1
L S1
V V1
R V1
L V1
V TV
R TV
L TV
DET SLCT
DET IN
R OUT2
L OUT2
O 4
GND
SCL
SDA
SYNC OUT
ADRS
V V2
L V2
Y IN
R V2
C IN
VCC
C OUT1
R OUT1
Y OUT1
L OUT1
V OUT1
R OUT TV
L OUT TV
O 5
V OUT2
E3
E2
E1
TV2
TV1
DV02
DV03
DV04
MTZJ9.1A
DV05
MTZJ9.1A
RV35
10K
CV08
16V470μ
RV108
10K
RV109
10K
CV07
16V470μ
+9V
GND
RV09
SCL1
RV10
SDA1
RV11
SYNC-AV
RV110
12K
CV09
16V10μ
VV2
RV12
L OUT1
RS11
CS09 50V1μ
R OUT1
GV13
CV10
CS10
Y-COMB
GV14
C-COMB
CS11
0.01
CV12
0.01
GV15
C-AV
RS13
AV-R
GV16
Y-AV
RS14
AV-L
GV17
V-AV
RV111
10K
RV19
100
QV13
2SC1740-S
CV13
0.01
RV20
3.3K
PIP-V
QS04
2SC1815Y
or 2SC1740S
RS33
100
RS34
2.2K
RS35
100
QS05
2SC1815Y
or 2SC1740S
RS36
2.2K
RS25
10K
QS01
2SC2878A
RS26
10K
QS02
2SC2878A
CS32
16V10μ
RS27
560
RS30
100K
Mout-L
CS33
16V10μ
RS28
560
RS29
100K
Mout-R
LV48
PL-10
CV40
16V100μ
CV41
0.01
RV40
8.2K
RV42
470
LV41
PL-27
LV40
PL-27
CV43
82
CV42
16V33μ
NP
QV40
2SC1740S
OR2SC1815Y
RV44
820
RV43
470
RV41
4.7K
TV-V
LV47
PL-10
CV46
16V47μ
CV47
0.01
RV80
1K
V V1
RV81
100
RV63
100
QV47
2SA1015Y
RV503
33K
QV502
2SC1740S
RV510
100
RV504
22K
RV505
1K
Y
RV508
1K
QV503
2SC1740S
RV506 100
RV502
22K
RV507
1K
QV509
2SC1740S
RV509
1K
Cb
RV520
33K
RV522
1K
RV524 470
RV523
100
QV504
2SA933S
RV521
22K
QV512
2SC1740S
TA10U
RV531
3.3K
RV526
6.8K
CV506
16V470μ
CV507
16V10μ
RV527
13K
RV525
470
QV510
2SA933S
RV528
680
QV520
2SC1740S
RV540
1K
Cr
RV131
220
RV127
100
QV14
RN1203
RV128
100
QV12
2SC1815Y
or 2SC1740S
QS601
2SC1740SQ
or
2SC1815Y
RS601
100
AV-L
CS601
16V10μ
RS605
560
RS603
4.7K
RS607
100K
RS609
10K
QS602
2SC1740S.
or
2SC1815Y
RS602
100
AV-R
CS602
16V10μ
RS606
560
RS604
4.7K
RS608
100K
RS610
10K
QS03
RN2004
RS31
1K
RS32
10K
CS23
50V0.47μ
LZ11
ZBF253D -00
CZ30
16V10μ
GZ03
PL-10
CZ28
0.01
CZ12
0.01
CZ03
50V0.47μ
CZ05
0.01
LZ04
PL-33
CZ36 OPEN
CZ25
16V10μ
CZ22
16V10μ
LZ05
PL-27
CZ24
0.01
CZ23
0.01
RZ30
330
RZ29
330
CZ29
0.01
QZ01
TC90A49P
AVDD
BIAS
VRT
AIN
VPB
DVDD
DVSS
DVDD
SDA
SCL
Y OUT
BIAS1
BIAS2
C OUT
AVSS
AVDD
FIL
CK IN
KILLER
TEST
RESET
CZ08
OPEN
CZ17
0.01
CZ26
0.01
CZ13
0.01
CZ14
16V10μ
RZ06
820
CZ19
180
CZ45
10
GJ61
SHORT
GJ62
SHORT
CZ20
0.01
CZ21
1200
CZ16
OPEN
GZ02
PL-10
LZ08
PL-39
GND
FSC

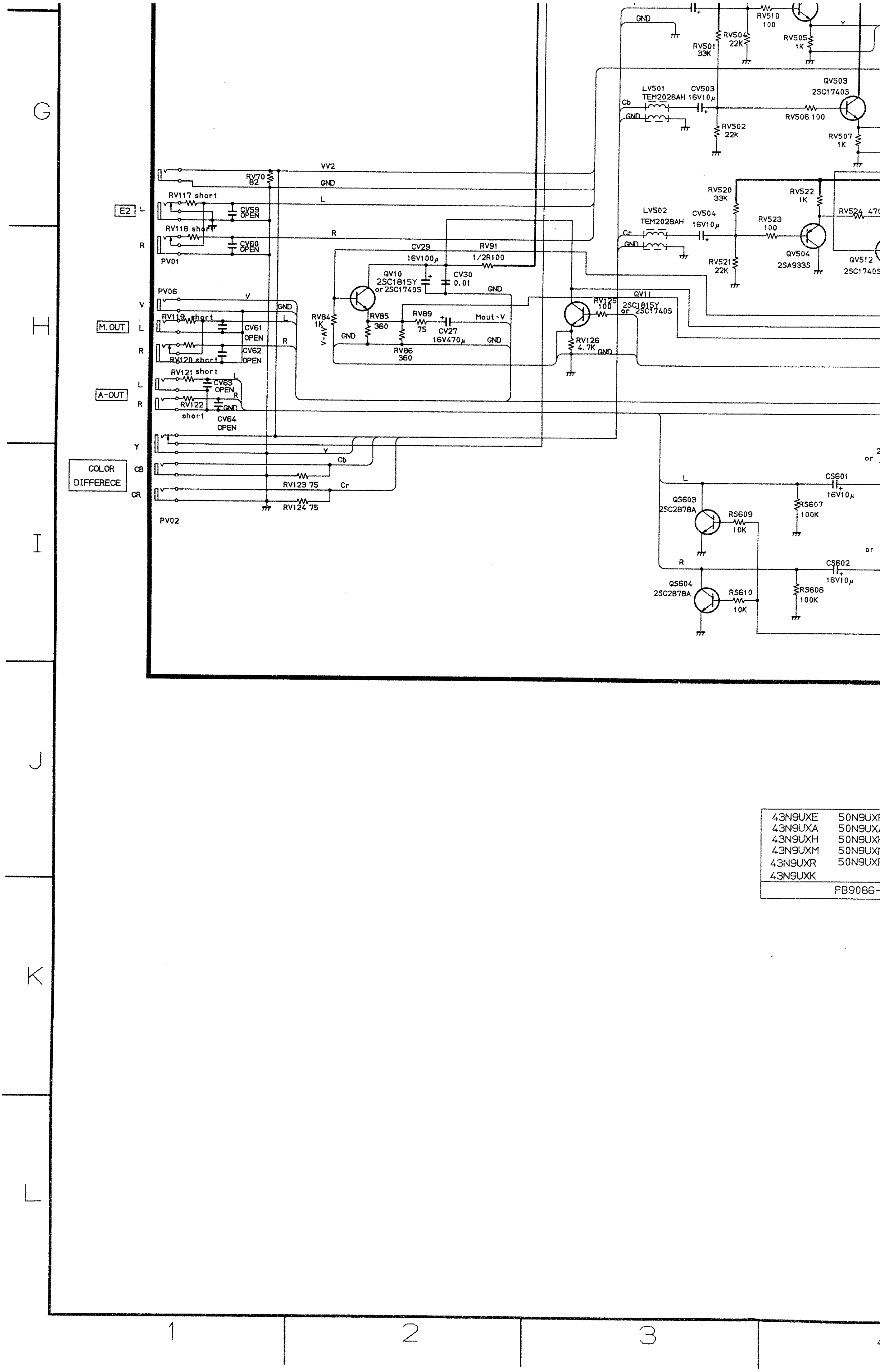

SW-2
SW-1
W-IN
R-IN
L-IN
GND
GND
GND
V-FQ
SGV
SGA
TV-L
TV-R
TV-2L
GND
TV-V
GND
TV-2V
3.58/PAL
Y-IN
GND
C-IN
GND
V-AV
GND
+9V-3
SDA1
SCL1
SYNC/AV
Y-TEXT
GND
C-AV
GND
Y-AV
GND
PIP-V
GND
PIP-L
A-MUTE
V-MUTE
AL
A GND
+38V
W
NC
SCL2
SDA2
GND
FSC
+5V-2
C-COMB
GND
Y-COMB
GND
THRU
PV038
56P
TO SIGNAL
LV48
PL-10
CV40
16V100µ
CV41
0.01
RV40 8.2K
RV42 470
LV41 PL-27
LV40 PL-27
RV45 150
CV44 100
RV48 1K
RV60 6.8K
CV43 82
RV46 1K
QV42 2SA933S OR2SA1015Y
CV42 16V33µ NP
QV40 2SC1740S OR2SC1815Y
RV44 820
QV41 2SC1740S OR2SC1815Y
QV43 2SA1015Y
RV41 4.7K
RV43 470
RV47 1K
RV49 1K
CV43A 9P
TV-V
GND
TV-I
TV-R
TV-V
GND
LV47 PL-10
CV46 16V47µ
CV47 0.01
RV80 1K
V V1
RV81 100
RV63 100
V V1
QV47 2SA1015Y
GND
GJ02 SHORT
LV03 OPEN
GJ01 SHORT
I V1
GJ04 SHORT
TV-V
LV04 OPEN
GND
GJ03 SHORT
LV02 TEM2028K
LZ11
ZBF253D-00
LZ09
ZBF253D-00
+5V-2
CZ37 0.1
LZ10
ZBF253D-00
+9V-3
CZ38 0.1
CZ28 0.01
CZ12 0.01
CZ03 50V0.47µ
CZ05 0.01
LZ04 PL-33
CZ25 16V10µ
CZ22 16V10µ
LZ05 PL-27
CZ36 OPEN
CZ24 0.01
CZ23 0.01
RZ30 330
RZ29 330
3
4
5
6
7
8
9
10
VRT
AIN
VPB
DVDD
DVSS
DVDD
SDA
SCL
5.0
5.0
5.0
BIAS2
C OUT
AVSS
AVDD
FIL
CK IN
KILLER
TEST RESET
18
17
16
15
14
13
12
11
CZ08 OPEN
CZ26 0.01
CZ13 0.01
CZ14 16V10µ
RZ06 820
CZ19 180
CZ45 10
GJ61 SHORT
GJ62 SHORT
CZ20 0.01
CZ21 1200
CZ16 OPEN
GZ02 PL-10
LZ08 PL-39
GND
FSC
RZ22 2.2K
QZ03 2SA933S,Q
RZ07 100
CZ07 0.1
RZ04 1K
RZ05 220
RZ08 470
QZ02 2SC1740S,Q
RZ20 100
QZ05 2SA933 S,Q
RZ19 1K
Y-COMB
CZ32 47p
CZ33 47p
RZ14 1K
LV06 OPEN
GJ10 SHORT
GJ11 SHORT
GND
RZ10 2.2K
QZ06 2SA933
RZ11 100
CZ31 0.1
RZ13 1K
RZ17 220
RZ18 470
QZ08 2SC1740
RZ12 1K
RZ09 100
QZ04 2SA933S,Q
C-COMB
CZ34 47p
CZ35 47p
RZ15 1K
GND
RZ03 3.3K
GJ63 OPEN
CZ10 10
LZ01 PL-22
RZ01 1K
GJ08 SHORT
QZ07 2SA933S,Q
RZ02 1K
CZ11 22
CZ09 22
LV05 OPEN
AV-V
GND
GJ09 SHORT
THRU
RZ31 OPEN
FSC
GND
PV520
Y 6P
Y
GND
Cb
GND
Cr
GND
Cb
Cr
TO VCD P520
PM02
B/B PLUG
GND
NC(DAC-1)
Ys PIP
RED
GREEN
BLU
NC(21PIN Ys)
TO SIGNAL
VD
HD
2SC75
RT15
33K


SW-1
W-IN
R-IN
L-IN
GND
GND
GND
V-FQ
SGV
SGA
TV-L
TV-R
TV-2L
GND
TV-V
GND
TV-2V
3.58/PAL
Y-IN
GND
C-IN
GND
V-AV
GND
+9V-3
SDA1
SCL1
SYNC/AV
Y-TEXT
GND
C-AV
GND
Y-AV
GND
PIP-V
GND
PIP-L
A-MUTE
V-MUTE
AL
A GND
+38V
W
NC
SCL2
SDA2
GND
FSC
+5V-2
C-COMB
GND
Y-COMB
GND
THRU
TO SIGNAL
GND
Y
GND
Cb
GND
Cr
GND
TO VCD P520
LT03 2.2μ
CT05 0.1
CT06 16V47μ
CT07 16V10μ
5.0
VDDD(M)
XTAL O
XTA I
OSCGND
XT01 12MHz
CT08 56(CH)
CT09 56(CH)
LT04 2.2μ
CT10 16V47μ
CT11 0.1
VDDD(T)
GND
V SYNC
H SYNC
YS
R
G
B
RT14 2.2K
VD
HD
QT03 2SC752GTM-Y
QT02 2SC1740S
RT15 33K
RT16 10K
RT13 1K
RT03 1K
RT04 1K
RT05 10
LT07 2.2μ
LT08 2.2μ
LT09 2.2μ
LT05 2.2μ
RT43 150
RT40 150
RT38 150
RT09 3.3K
CT12 16V47μ
CT13 0.1
LT06 2.2μ
RT29 1K
TEXT Ys
SCL
SDA
4.0
CT14 M0.1
CT17 M0.1
RT28 100
RT27 24KG
RT31 4.7K
RT30 4.7K
QT07 S24C02ADPA or AT24C02
TEXT-B
TEXT-G
TEXT-R
LT15 OPEN
CT21 16V10μ
CT15 OPEN
RT21 OPEN
CT20 0.001
RT17 560
LT10 2.2μ
QT05 OPEN
RT37 SHORT
QT04 2SA1015Y or2SA933S
RT18 1.5K
RT19 1.2K
CT16 OPEN
RT20 OPEN
GJ11 SHORT
GND TEXT
TEXT
+9V
RGB SW
QR01 TC74HC4053AP
RR23 100
+5V-3
CR05 0.01
R-OUT
B-OUT
G-OUT
CR06 16V10μ
GJ01 OPEN
GJ03 OPEN
GJ02 OPEN
PCB
TEXT R
RR01 4.7K
QR04 2SA933S
RR33 4.7K
RR02 4.7K
TEXT G
QR05 2SA1015Y or2SA933S
RR03 4.7K
TEXT B
QR06 2SA1015Y or2SA933S
RM02 7P B/B PLUG
CR01 M0.1
RED
CR02 M0.1
GREEN
CR03 M0.1
BLU
GND
NC(DAC-1)
Ys PIP
RED
GREEN
BLU
NC(21PIN Ys)
TO SIGNAL
QR22 2SC1815Y or2SC1740S
QR21 2SC1815Y or2SC1740S
QR20 2SC1815Y or2SC1740
RR30 4.7K
RR31 27
CR12 16V10μ
DR31 1SS133
RR29 47K
RR28 47K
RR27 47K
RR17 1K
QR15 2SA1015-Y
DR03 OPEN
RR20 OPEN
RR50 2.2K
CR16 47p
RR51 2.7K
QR17 2SC1740S
RR18 1K
DR01 1SS120-7 or1SS133
TEXT Ys
Ys OUT
43N
43N
43N


QT07
S24C02ADPA or AT24C02
HD
DD/EUEN
SCL
SDA
SCL2
SDA2
+5V-3
PM01
15P B/B PLUG
TEXT-B
TEXT-G
TEXT-R
LT15 OPEN
CT21 16V10μ
CT15 OPEN
RT21 OPEN
CT20 0.001
8.9
RT37 SHORT
QT05 OPEN
3.6
1.6
RT19 1.2K
2.9
GJ11 SHORT
RT18 1.5K
CT16 OPEN
RT20 OPEN
VD
HD
R-OUT
G-OUT
B-OUT
TEXT R
TEXT G
TEXT B
HD
TEXT Ys
Ys OUT
+9V
CR06 16V10μ
+5V-3
R-OUT
G-OUT
B-OUT
GJ01 OPEN
GJ03 OPEN
GJ02 OPEN
PCB
RR01 4.7K
TEXT R
QR04 2SA933S
0.7
0
RR24 3.3K
RR33 4.7K
RR02 4.7K
TEXT G
QR05 2SA1015Y or 2SA933S
RR25 3.3K
RR03 4.7K
RR34 4.7K
TEXT B
QR06 2SA1015Y or 2SA933S
RR26 3.3K
RR35 4.7K
RR39 2.2K
RR40 22K
RR41 10K
7.1
QR18 2SC752GTM-Y
RED
GREEN
BLU
QR22 2SC1815Y or 2SC1740S
QR21 2SC1815Y or 2SC1740S
QR20 2SC1815Y or 2SC1740S
0.6
0.5
CR12 16V10μ
RR29 47K
RR28 47K
RR27 47K
RR22 2.2K
RR12 22K
QR19 2SC752GTM-Y
0.3
RR21 10K
D
E
F
G
H
I

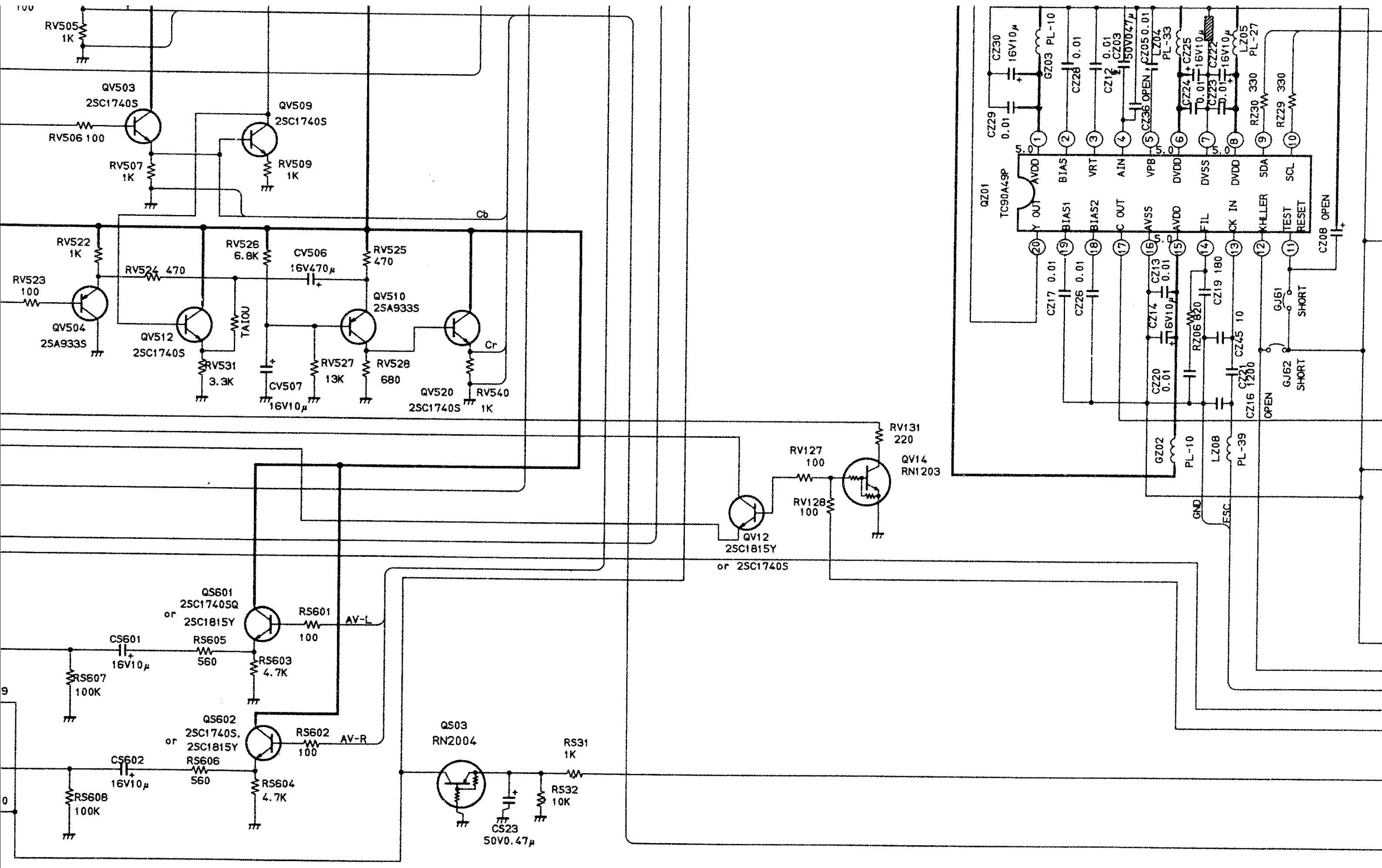
TEXT RGB SW

43N9UXC 50N9UXC 43N9UXH 50N9UXH 43N9UXK 61N9UXC	43N9UXE 50N9UXE 43N9UXA 50N9UXA 43N9UXM 50N9UXM	43N9UXR 50N9UXR
——	PB9058	PB9059

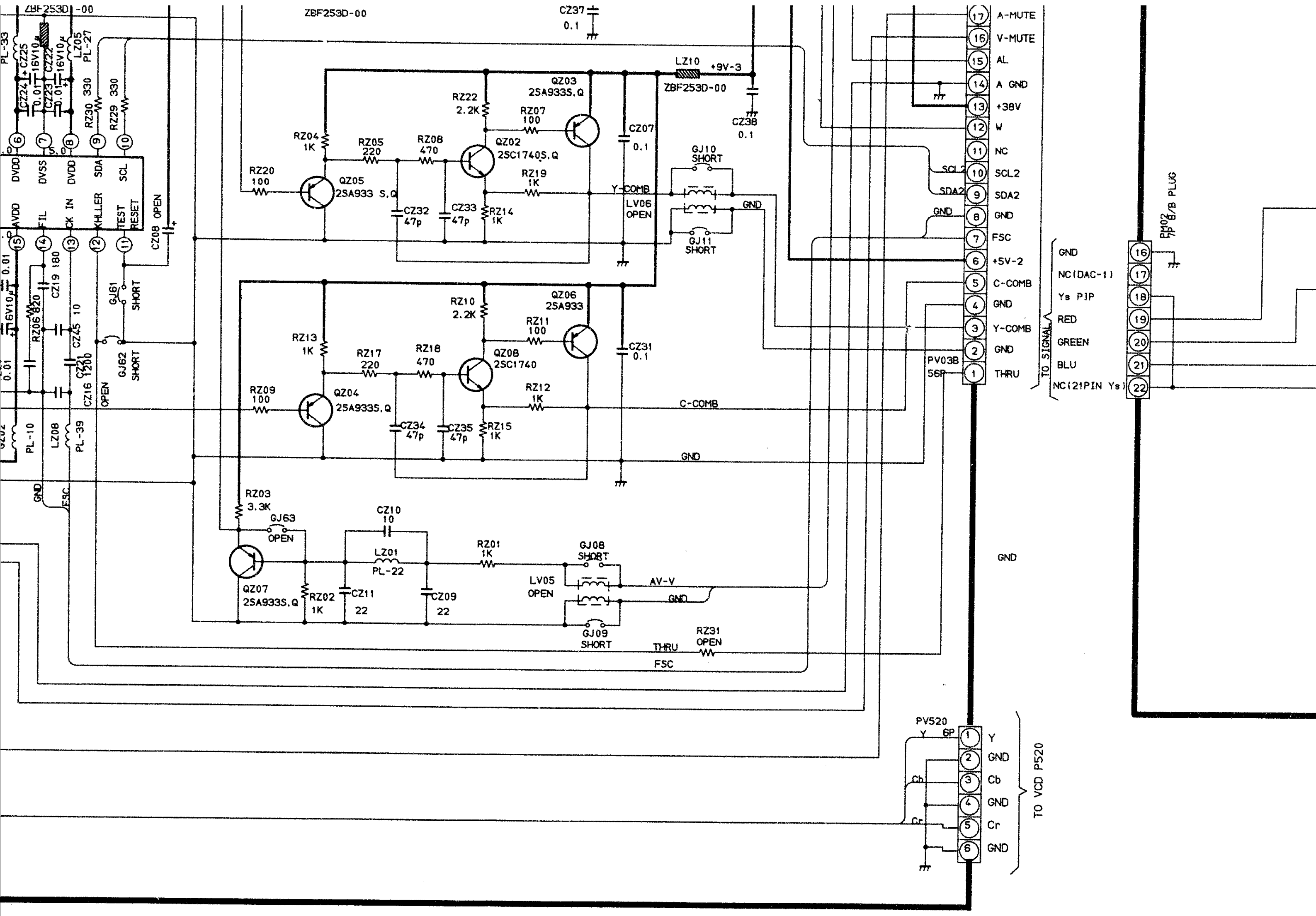

G
H
I
J
K
L
1
2
3
GND
RV510
100
RV504
22K
RV501
33K
RV505
1K
Y
LV501
TEM2028AH
CV503
16V10μ
QV503
2SC1740S
Cb
GND
RV506 100
RV502
22K
RV507
1K
RV520
33K
RV522
1K
RV524 470
LV502
TEM2028AH
CV504
16V10μ
RV523
100
Cr
GND
RV521
22K
QV504
2SA933S
QV512
2SC1740S
VV2
GND
L
R
RV70
82
RV117 short
CV59
OPEN
E2
L
R
RV118 short
CV60
OPEN
PV01
CV29
16V100μ
RV91
1/2R100
QV10
2SC1815Y
or 2SC1740S
CV30
0.01
GND
PV06
V
M.OUT
L
R
RV119 short
CV61
OPEN
RV120 short
CV62
OPEN
RV84
1K
V-AV
RV85
360
RV89
75
CV27
16V470μ
Mout-V
RV86
360
QV11
2SC1815Y
or 2SC1740S
RV125
100
RV126
4.7K
A-OUT
RV121 short
CV63
OPEN
RV122
short
CV64
OPEN
COLOR
DIFFERECE
Y
CB
CR
Cb
Cr
RV123 75
RV124 75
PV02
CS601
16V10μ
QS603
2SC2878A
RS607
100K
RS609
10K
CS602
16V10μ
QS604
2SC2878A
RS608
100K
RS610
10K
or

43N9UXE 50N9UX
43N9UXA 50N9UX
43N9UXH 50N9UX
43N9UXM 50N9UX
43N9UXR 50N9UX
43N9UXK

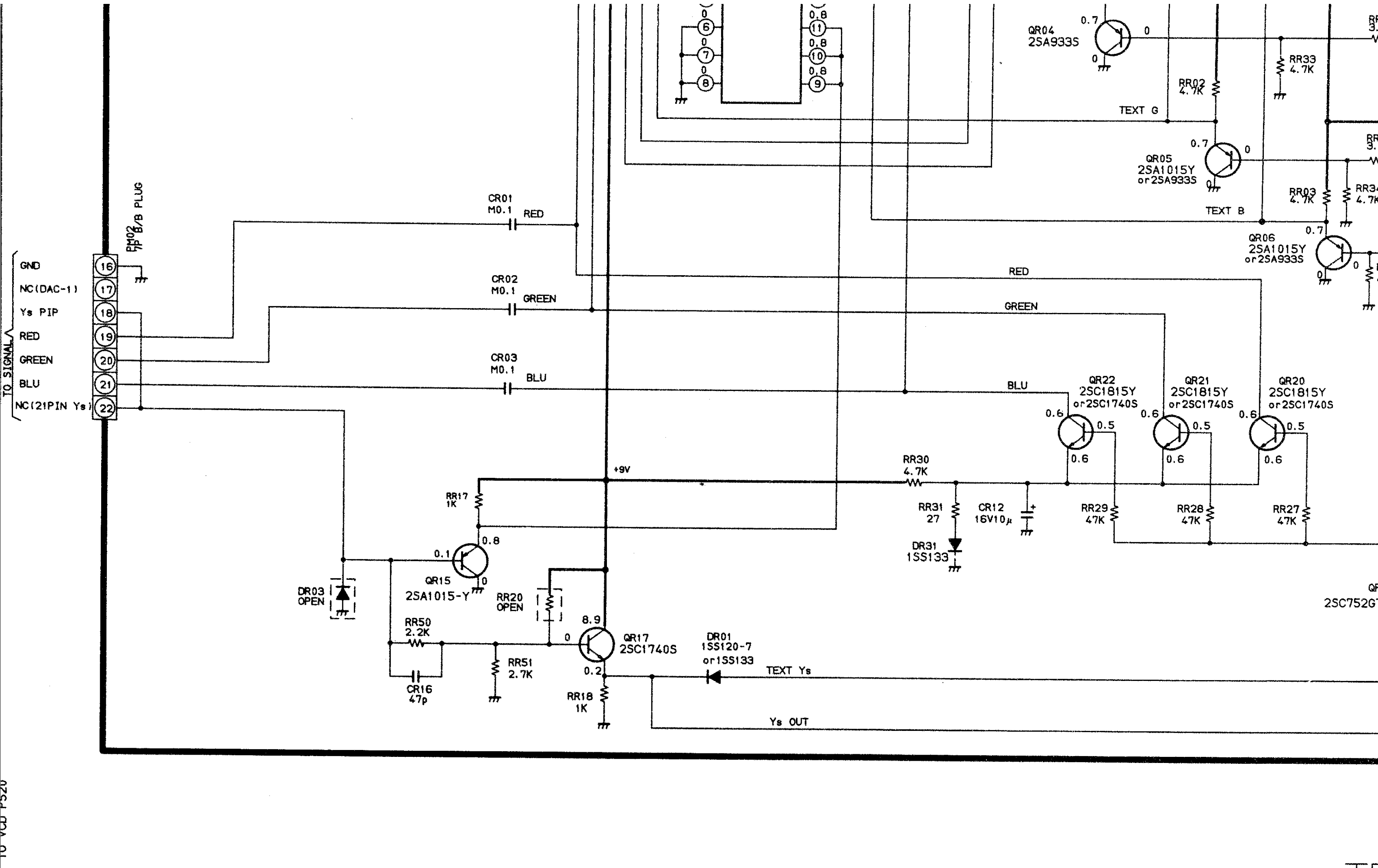
PB9086-


RV505
1K
QV503
2SC1740S
RV506 100
RV507
1K
QV509
2SC1740S
RV509
1K
Cb
RV522
1K
RV523
100
RV524 470
QV504
2SA933S
QV512
2SC1740S
RV531
3.3K
TA10U
RV526
6.8K
CV506
16V470μ
RV525
470
CV507
16V10μ
RV527
13K
QV510
2SA933S
RV528
680
QV520
2SC1740S
Cr
RV540
1K
RV131
220
RV127
100
QV14
RN1203
RV128
100
QV12
2SC1815Y
or 2SC1740S
QS601
2SC1740SQ
or
2SC1815Y
RS601
100
AV-L
CS601
16V10μ
RS605
560
RS603
4.7K
RS607
100K
QS602
2SC1740S
or
2SC1815Y
RS602
100
AV-R
CS602
16V10μ
RS606
560
RS604
4.7K
RS608
100K
QS03
RN2004
RS31
1K
RS32
10K
CS23
50V0.47μ
CZ30
16V10μ
GZ03 PL-10
CZ29
0.01
CZ28 0.01
CZ12 0.01
CZ03
50V047μ
CZ36 OPEN
CZ05 0.01
LZ04
PL-33
CZ25
16V10μ
CZ24
0.01
CZ22
16V10μ
CZ23
0.01
LZ05
PL-27
RZ30 330
RZ29 330
5.0
QZ01
TC90A49P
AVDD
BIAS
VRT
AIN
VPB
DVDD
DVSS
DVDD
SDA
SCL
Y OUT
BIAS1
BIAS2
C OUT
AVSS
AVDD
FIL
CK IN
KILLER
TEST
RESET
CZ08 OPEN
CZ17 0.01
CZ26 0.01
CZ13
0.01
CZ14
16V10μ
RZ06 820
CZ19 180
CZ45 10
CZ20
0.01
CZ21
1200
CZ16
OPEN
GJ61
SHORT
GJ62
SHORT
GZ02
PL-10
LZ08
PL-39
GND
ESC

43N9UXE 43N9UXA 43N9UXH 43N9UXM 43N9UXR 43N9UXK	50N9UXE 50N9UXA 50N9UXH 50N9UXM 50N9UXR	43N9UXC 50N9UXC 61N9UXC
PB9086-1		PB9086D-1


ZBF253D-00
ZBF253D-00
CZ37 0.1
LZ10
+9V-3
ZBF253D-00
CZ38 0.1
PL-33
CZ25
CZ24 0.01
16V10μ
CZ23 0.01
CZ22 16V10μ
LZ05 PL-27
RZ30 330
RZ29 330
DVDD
DVSS
5.0
DVDD
SDA
SCL
AVDD
FIL
CK IN
KHLLER
TEST RESET
CZ08 OPEN
RZ22 2.2K
QZ03 2SA933S.Q
RZ07 100
QZ02 2SC1740S.Q
CZ07 0.1
RZ04 1K
RZ05 220
RZ08 470
RZ19 1K
RZ20 100
QZ05 2SA933 S.Q
CZ32 47p
CZ33 47p
RZ14 1K
Y-COMB
LV06 OPEN
GJ10 SHORT
GJ11 SHORT
GND
CZ19 180
RZ06 820
CZ45 10
CZ21 1200
CZ16
GJ61 SHORT
GJ62 SHORT
OPEN
16V10μ
0.01
RZ10 2.2K
QZ06 2SA933
RZ11 100
CZ31 0.1
RZ13 1K
RZ17 220
RZ18 470
QZ08 2SC1740
RZ12 1K
RZ09 100
QZ04 2SA933S.Q
CZ34 47p
CZ35 47p
RZ15 1K
C-COMB
GND
PL-10
LZ08
PL-39
GND
FSC
RZ03 3.3K
GJ63 OPEN
CZ10 10
LZ01 PL-22
RZ01 1K
GJ08 SHORT
LV05 OPEN
AV-V
GND
QZ07 2SA933S.Q
RZ02 1K
CZ11 22
CZ09 22
GJ09 SHORT
THRU
RZ31 OPEN
FSC
SCL2
SDA2
GND
PV03B 56P
17 A-MUTE
16 V-MUTE
15 AL
14 A GND
13 +38V
12 W
11 NC
10 SCL2
9 SDA2
8 GND
7 FSC
6 +5V-2
5 C-COMB
4 GND
3 Y-COMB
2 GND
1 THRU
TO SIGNAL
GND
16 GND
17 NC(DAC-1)
18 Ys PIP
19 RED
20 GREEN
21 BLU
22 NC(21PIN Ys)
PH02 7P B/B PLUG
PV520 6P
Y
Cb
Cr
1 Y
2 GND
3 Cb
4 GND
5 Cr
6 GND
TO VCD P520

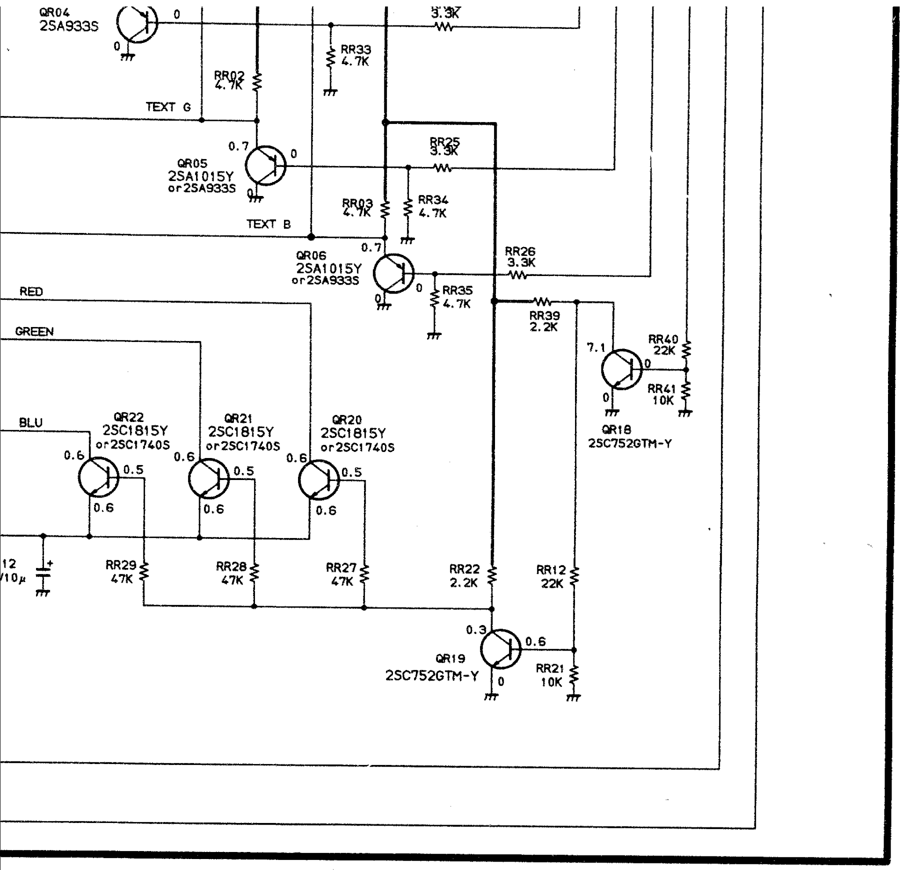
7 8 9 10 11


TO SIGNAL
TO VCD P520
PM02 7P B/B PLUG
GND
NC(DAC-1)
Ys PIP
RED
GREEN
BLU
NC(21PIN Ys)
16
17
18
19
20
21
22
CR01 M0.1
RED
CR02 M0.1
GREEN
CR03 M0.1
BLU
+9V
RR17 1K
QR15 2SA1015-Y
0.1
0.8
0
DR03 OPEN
RR50 2.2K
CR16 47p
RR51 2.7K
RR20 OPEN
8.9
0
0.2
QR17 2SC1740S
RR18 1K
DR01 1SS120-7 or1SS133
TEXT Ys
Ys OUT
RR30 4.7K
RR31 27
DR31 1SS133
CR12 16V10μ
QR22 2SC1815Y or2SC1740S
QR21 2SC1815Y or2SC1740S
QR20 2SC1815Y or2SC1740S
0.6
0.5
RR29 47K
RR28 47K
RR27 47K
2SC752G
QR04 2SA933S
0.7
RR33 4.7K
RR02 4.7K
TEXT G
QR05 2SA1015Y or2SA933S
RR03 4.7K
RR34 4.7K
TEXT B
QR06 2SA1015Y or2SA933S
6
7
8
9
10
11

TE

43N9UXC
43N9UXH
43N9UXK

11	12	13	14


QR04
2SA933S
RR02 4.7K
RR33 4.7K
3.3K
TEXT G
QR05
2SA1015Y
or 2SA933S
RR25 3.3K
RR03 4.7K
RR34 4.7K
TEXT B
QR06
2SA1015Y
or 2SA933S
RR26 3.3K
RR35 4.7K
RR39 2.2K
RED
GREEN
BLU
RR40 22K
RR41 10K
QR18
2SC752GTM-Y
QR22
2SC1815Y
or 2SC1740S
QR21
2SC1815Y
or 2SC1740S
QR20
2SC1815Y
or 2SC1740S
12
/10μ
RR29 47K
RR28 47K
RR27 47K
RR22 2.2K
RR12 22K
QR19
2SC752GTM-Y
RR21 10K
0
0.7
7.1
0.6
0.5
0.3

TEXT RGB SW

43N9UXC 50N9UXC 43N9UXH 50N9UXH 43N9UXK 61N9UXC	43N9UXE 50N9UXE 43N9UXA 50N9UXA 43N9UXM 50N9UXM	43N9UXR 50N9UXR
——	PB9058	PB9059

SCHEMATIC DIAGRAM MODEL : 50N9UXE / 50N9UXH (6/6)
50N9UXA / 50N9UXM

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 3. Do not degrade the safety of the receiver through improper servicing.

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position. Set other controls for best picture.

NOTES:

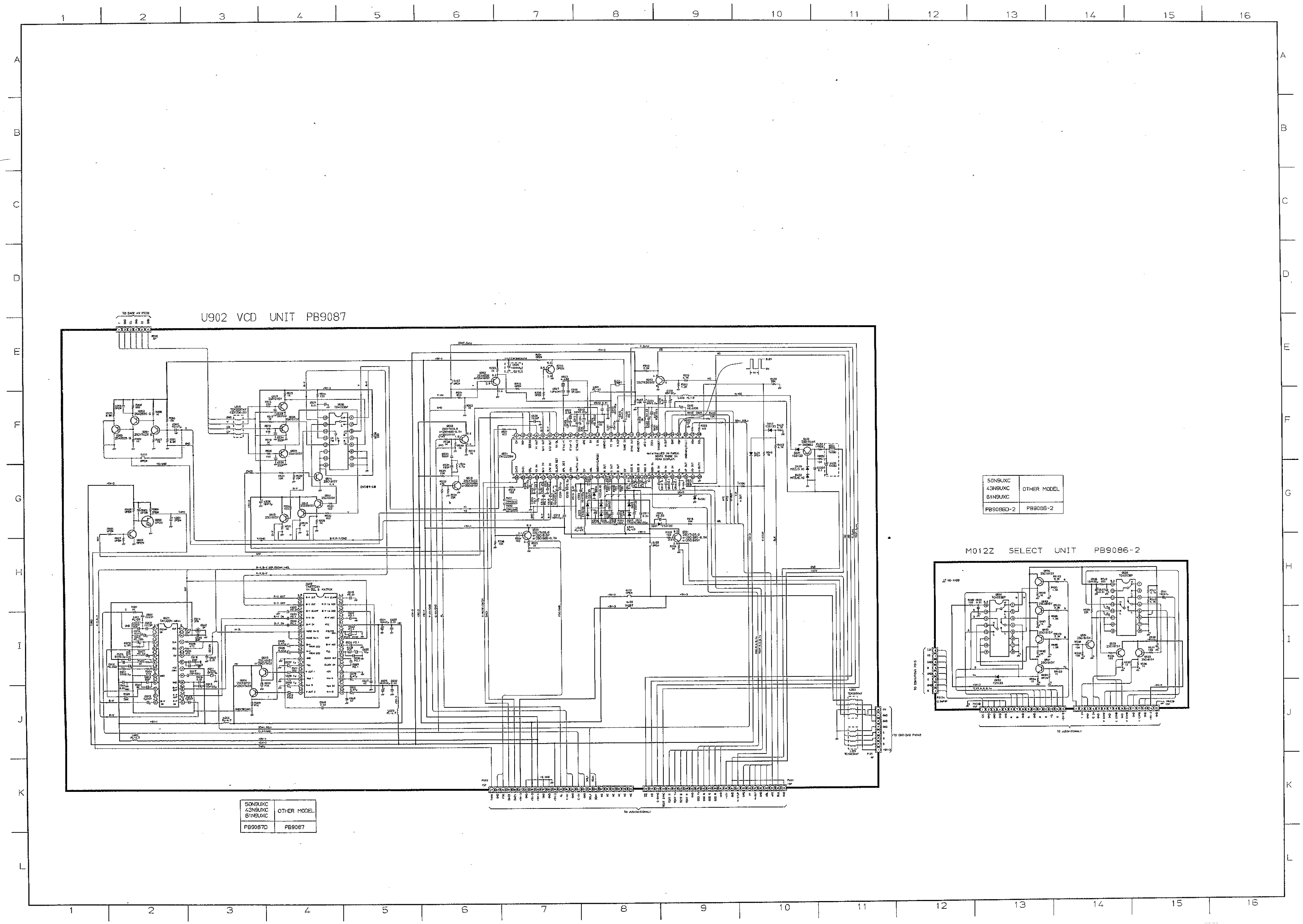
1. D.C. resistance value of a principal transformer is shown in this schematic diagram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH, and the values less than 1 in H.

040-9909

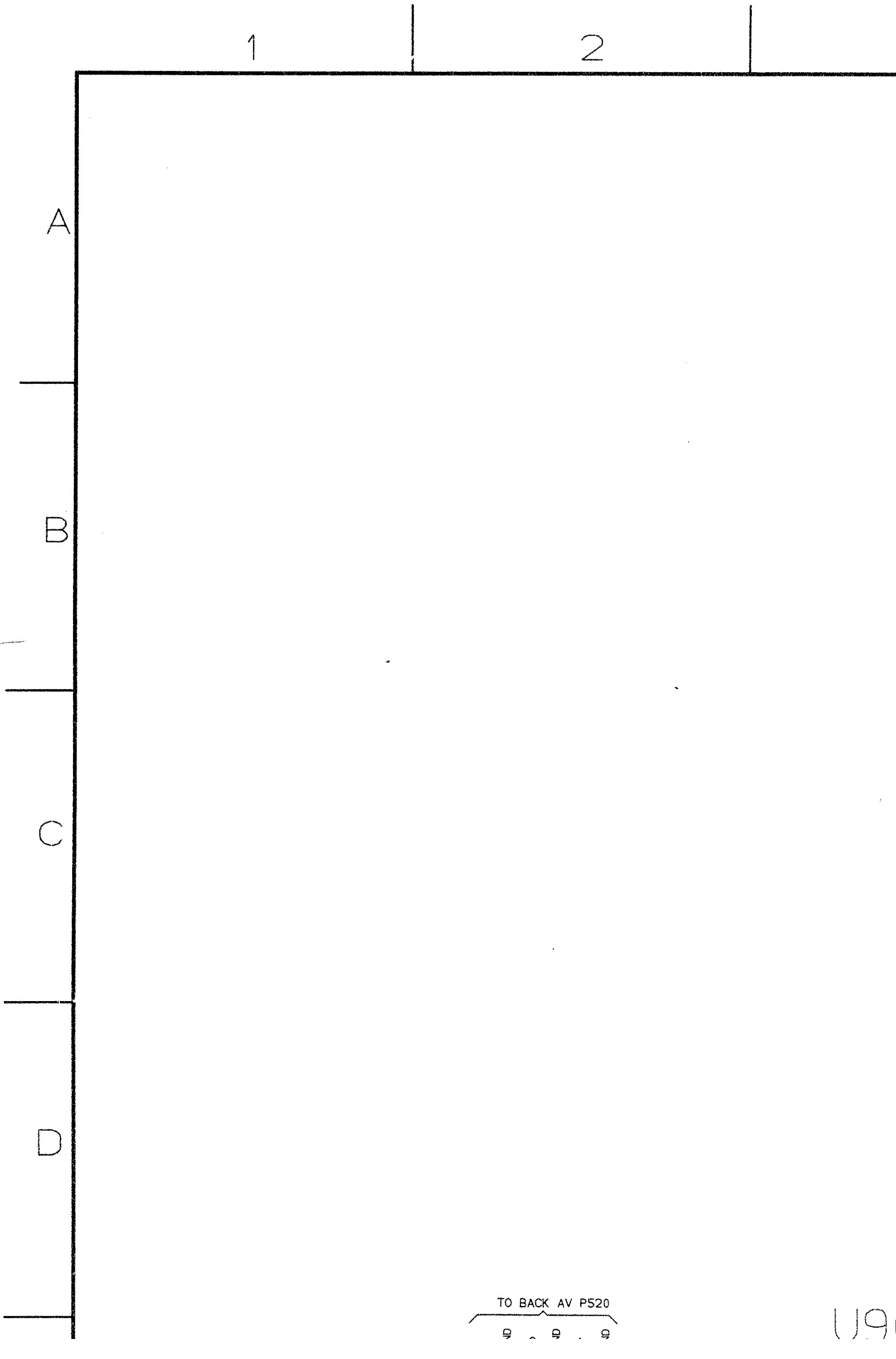

U902 VCD UNIT PB9087
50N9UXC 43N9UXC 61N9UXC | OTHER MODEL
PB9087D | PB9087
M012Z SELECT UNIT PB9086-2
50N9UXC 43N9UXC 61N9UXC | OTHER MODEL
PB9086D-2 | PB9086-2
TO JUNCTION(MAIN)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
A B C D E F G H I J K L

SCHEMATIC DIAGRAM MODEL : 50N9UXE / 50N9U

50N9UXA / 50N9U

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate co ponents which have special characteristics important for safety and should be replaced only with types ide those in the original circuit or specified in the parts list. The mounting position of replacements is to be iden with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE 3. Do not degrade the safety of the receiver through improper servicing.

040-9909



N9UXH (6/6)
N9UXM

esignate com-
h types identical to
s to be identical
Y NOTICE on page

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 2 volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacity prob
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position ar BRIGHTNESS control is almost in maximum position. Set other controls for be picture.

3	4	5	6

U902 VCD UNIT PB9087

d, line voltage 220

ow capacity probe.

mid position and
r controls for best

NOTES:

1. D.C. resistance value of a principal transformer is shown in this sc gram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.

7 8 9 10

shown in this schematic dia-
cuit.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values l
   sed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values mo
   sed in μH, and the values less than 1 in H.

10	11	12	13

CITOR and INDUCTOR

=1,000, M=1,000,000
hematic, all capacitor values less than 1 are expres-
than 1 in pF.
ematic, all inductor values more than 1 are expres-
than 1 in H.

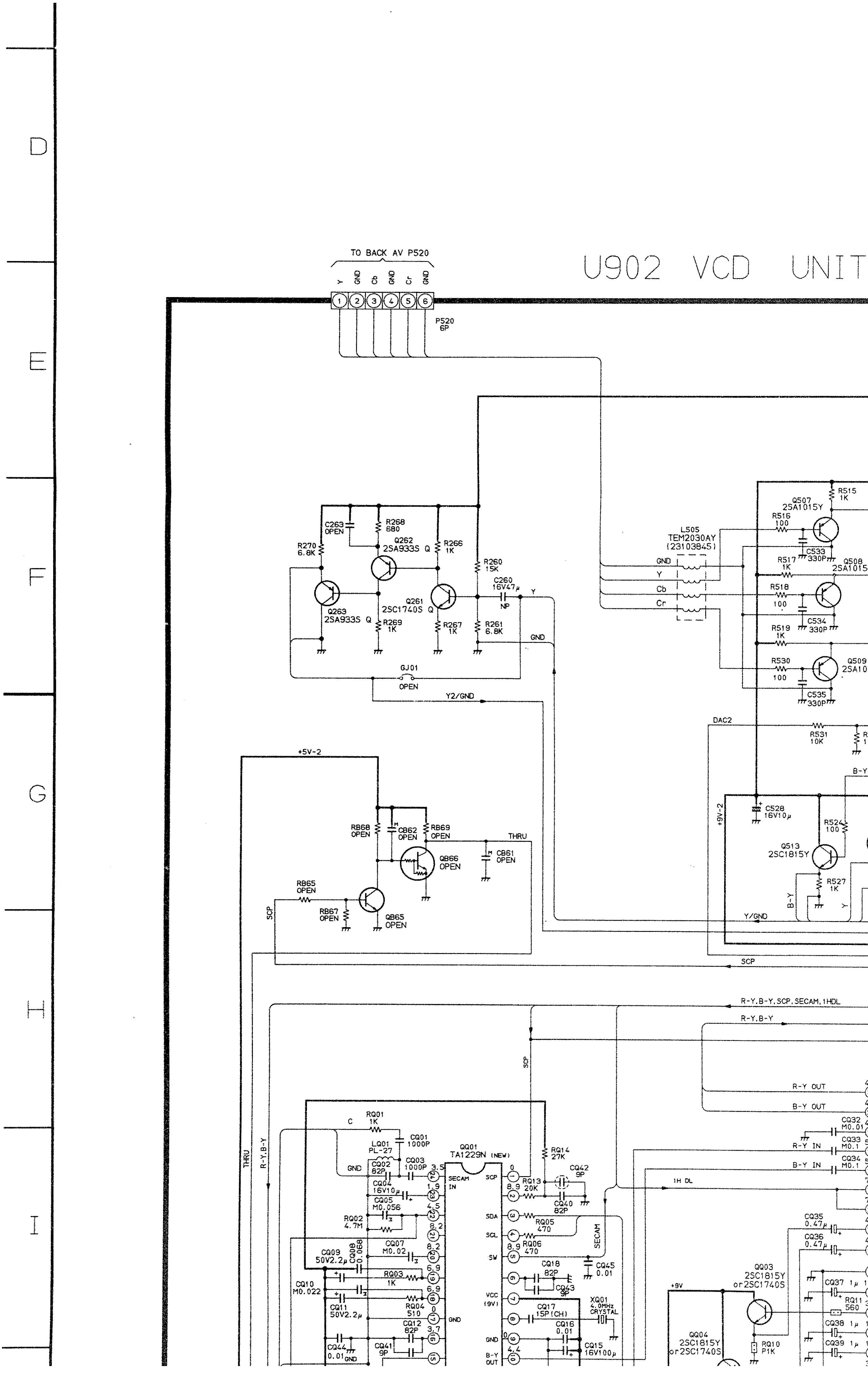
13 14 15 16

A

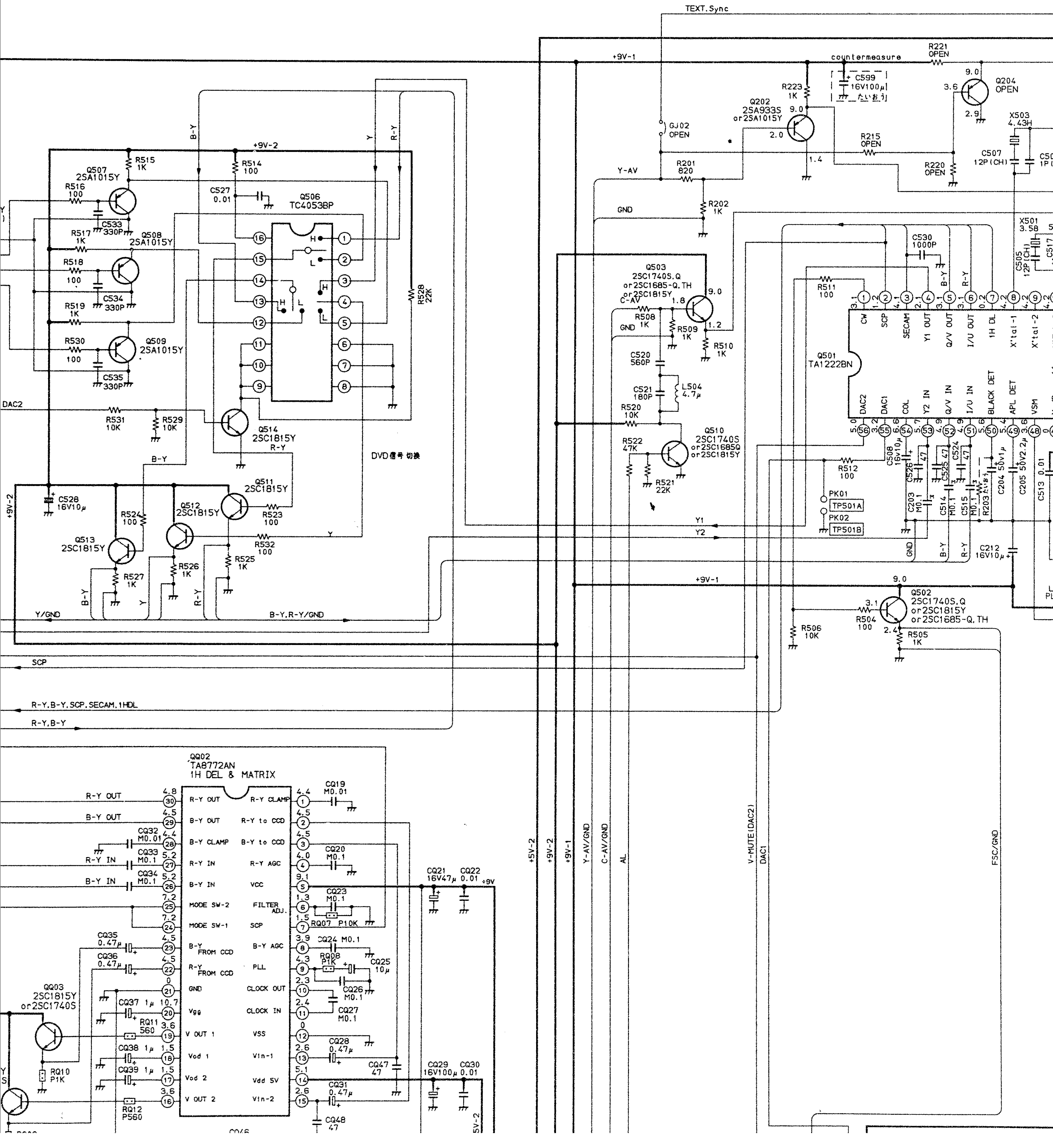
B

C

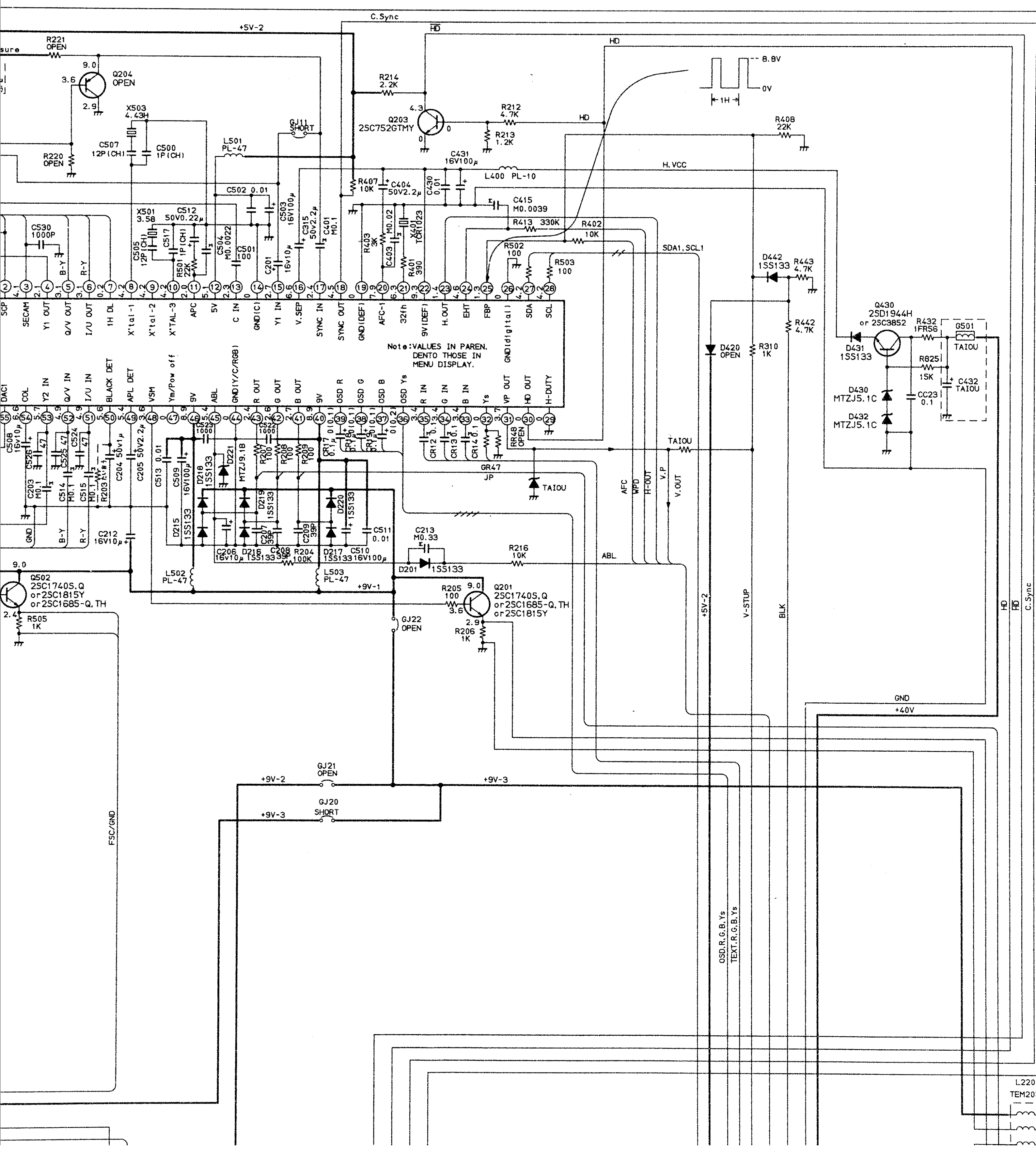
D

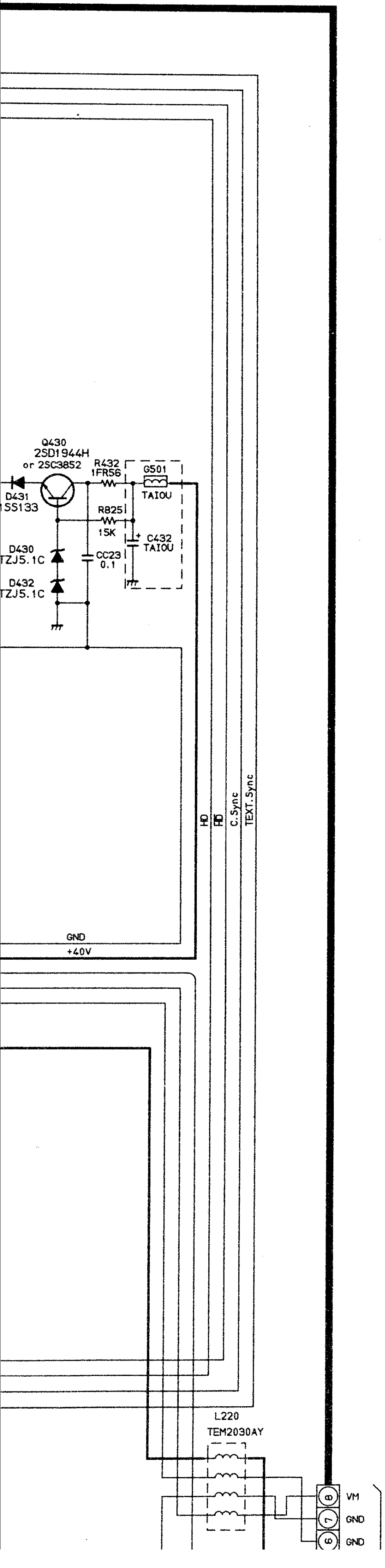

D
E
F
G
H
I
U902 VCD UNIT
TO BACK AV P520
Y
GND
Cb
GND
Cr
GND
1
2
3
4
5
6
P520
6P
L505
TEM2030AY
(23103845)
GND
Y
Cb
Cr
Q507
2SA1015Y
R515
1K
R516
100
C533
330P
R517
1K
Q508
2SA1015
R518
100
C534
330P
R519
1K
R530
100
Q509
2SA10
C535
330P
DAC2
R531
10K
B-Y
+9V-2
C528
16V10μ
R524
100
Q513
2SC1815Y
R527
1K
B-Y
Y
Y/GND
C263
OPEN
R268
680
Q262
2SA933S Q
R266
1K
R270
6.8K
R260
15K
C260
16V47μ
NP
Y
Q263
2SA933S Q
Q261
2SC1740S Q
R269
1K
R267
1K
R261
6.8K
GND
GJ01
OPEN
Y2/GND
+5V-2
RB68
OPEN
CB62
OPEN
RB69
OPEN
THRU
QB66
OPEN
CB61
OPEN
RB65
OPEN
RB67
OPEN
QB65
OPEN
SCP
SCP
R-Y.B-Y.SCP.SECAM.1HDL
R-Y.B-Y
SCP
R-Y OUT
B-Y OUT
CQ32
M0.01
CQ33
M0.1
R-Y IN
CQ34
M0.1
B-Y IN
1H DL
THRU
R-Y.B-Y
C
RQ01
1K
CQ01
1000P
LQ01
PL-27
GND
CQ02
82P
CQ03
1000P
QQ01
TA1229N (NEW)
SECAM IN
SCP
RQ14
27K
CQ42
9P
RQ13
20K
CQ40
82P
CQ04
16V10μ
CQ05
M0.056
RQ02
4.7M
SDA
RQ05
470
SCL
RQ06
470
SECAM
SW
CQ45
0.01
CQ07
M0.02
CQ08
0.068
CQ09
50V2.2μ
RQ03
1K
CQ10
M0.022
CQ11
50V2.2μ
RQ04
510
GND
CQ12
82P
CQ44
0.01
GND
CQ41
9P
CQ18
82P
CQ43
9P
VCC (9V)
CQ17
15P(CH)
XQ01
4.0MHz
CRYSTAL
CQ16
0.01
GND
CQ15
16V100μ
B-Y OUT
3.5
1.9
4.5
8.2
8.2
6.9
6.9
0
3.7
0
8.9
8.9
0
4.4
CQ35
0.47μ
CQ36
0.47μ
QQ03
2SC1815Y
or2SC1740S
+9V
CQ37 1μ
RQ11
560
CQ38 1μ
CQ39 1μ
RQ10
P1K
QQ04
2SC1815Y
or2SC1740S

CD UNIT PB9087



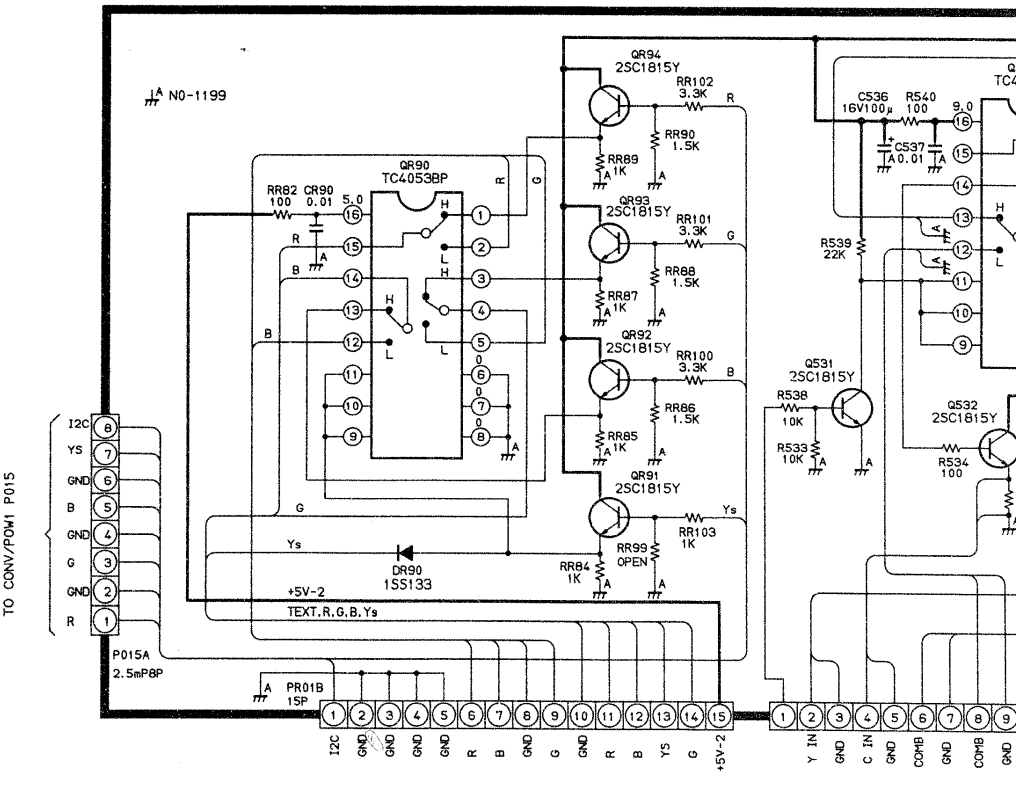
TEXT.Sync
+9V-1
countermeasure
R221 OPEN
C599 16V100μ
R223 1K
Q202 2SA933S or2SA1015Y
Q204 OPEN
R215 OPEN
R220 OPEN
X503 4.43H
C507 12P(CH)
GJ02 OPEN
Y-AV
R201 820
R202 1K
GND
X501 3.58
C530 1000P
C505 12P(CH)
Q503 2SC1740S,Q or2SC1685-Q,TH or2SC1815Y
C-AV
R508 1K
R509 1K
R510 1K
R511 100
C520 560P
C521 180P
L504 4.7μ
R520 10K
R522 47K
R521 22K
Q510 2SC1740S or2SC1685Q or2SC1815Y
Q501 TA1222BN
CW
SCP
SECAM
Y1 OUT
Q/V OUT
I/U OUT
1H DL
X'tal-1
X'tal-2
DAC2
DAC1
COL
Y2 IN
Q/V IN
I/U IN
BLACK DET
APL DET
VSM
R512 100
C508 16V10μ
C526 47
C525 47
C524 47
C203 M0.1
C514 M0.1
C515 M0.1
R203
C204 50V1μ
C205 50V2.2μ
C513 0.01
PK01 TP501A
PK02 TP501B
Y1
Y2
C212 16V10μ
Q502 2SC1740S,Q or2SC1815Y or2SC1685-Q,TH
R504 100
R505 1K
R506 10K
B-Y
R-Y
Y
+9V-2
R515 1K
R514 100
Q507 2SA1015Y
R516 100
C533 330P
R517 1K
Q508 2SA1015Y
R518 100
C534 330P
R519 1K
R530 100
Q509 2SA1015Y
C535 330P
C527 0.01
Q506 TC4053BP
R528 22K
DAC2
R531 10K
R529 10K
Q514 2SC1815Y
DVD信号切換
C528 16V10μ
R524 100
Q513 2SC1815Y
Q512 2SC1815Y
Q511 2SC1815Y
R523 100
R532 100
R527 1K
R526 1K
R525 1K
Y/GND
B-Y,R-Y/GND
SCP
R-Y,B-Y,SCP,SECAM,1HDL
R-Y,B-Y
QQ02 TA8772AN 1H DEL & MATRIX
R-Y OUT
B-Y OUT
B-Y CLAMP
R-Y IN
B-Y IN
MODE SW-2
MODE SW-1
B-Y FROM CCD
R-Y FROM CCD
GND
Vgg
V OUT 1
Vod 1
Vod 2
V OUT 2
R-Y CLAMP
R-Y to CCD
B-Y to CCD
R-Y AGC
Vcc
FILTER ADJ.
SCP
B-Y AGC
PLL
CLOCK OUT
CLOCK IN
VSS
Vin-1
Vdd 5V
Vin-2
CQ19 M0.01
CQ20 M0.1
CQ21 16V47μ
CQ22 0.01
+9V
CQ23 M0.1
RQ07 P10K
CQ24 M0.1
RQ08 P1K
CQ25 10μ
CQ26 M0.1
CQ27 M0.1
CQ28 0.47μ
CQ47 47
CQ29 16V100μ
CQ30 0.01
CQ31 0.47μ
CQ48 47
CQ32 M0.01
CQ33 M0.1
CQ34 M0.1
CQ35 0.47μ
CQ36 0.47μ
CQ37 1μ
RQ11 560
CQ38 1μ
CQ39 1μ
RQ12 P560
QQ03 2SC1815Y or2SC1740S
RQ10 P1K
CQ46
+5V-2
+9V-2
+9V-1
Y-AV/GND
C-AV/GND
AL
V-MUTE(DAC2)
DAC1
FSC/GND
5V-2


C.Sync
+5V-2
HD
R221 OPEN
Q204 OPEN
9.0
3.6
2.9
X503 4.43H
C507 12P(CH)
C500 1P(CH)
R220 OPEN
GJ11 SHORT
L501 PL-47
R214 2.2K
Q203 2SC752GTMY
4.3
R212 4.7K
R213 1.2K
8.9V
0V
1H
R408 22K
C431 16V100μ
L400 PL-10
H.VCC
R407 10K
C404 50V2.2μ
C430 0.01
C415 M0.0039
C502 0.01
X501 3.58
C512 50V0.22μ
C530 1000P
C503 16V100μ
C504 M0.0022
C501 100
C505 12P(CH)
C517 1P(CH)
R501 22K
C201 16V10μ
C315 50V2.2μ
C401 M0.1
R403 3K
M0.02
C403
X401 TCR1023
R401 390
R413 330K
R402 10K
R502 100
R503 100
SDA1,SCL1
D442 1SS133
R443 4.7K
R442 4.7K
R310 1K
D420 OPEN
Q430 2SD1944H or 2SC3852
R432 1FR56
G501 TAIOU
D431 1SS133
R825 15K
C432 TAIOU
D430 MTZJ5.1C
D432 MTZJ5.1C
CC23 0.1
SCP
SECAM
Y1 OUT
Q/V OUT
I/U OUT
1H DL
X'tal-1
X'tal-2
X'TAL-3
APC
5V
C IN
GND(C)
Y1 IN
V.SEP
SYNC IN
SYNC OUT
GND(DEF)
AFC-1
32fh
9V(DEF)
H.OUT
EHT
FBP
GND(digital)
SDA
SCL
Note:VALUES IN PAREN. DENTO THOSE IN MENU DISPLAY.
DAC1
COL
Y2 IN
Q/V IN
I/U IN
BLACK DET
APL DET
VSM
Ym/Pow off
9V
ABL
GND(Y/C/RGB)
R OUT
G OUT
B OUT
9V
OSD R
OSD G
OSD B
OSD Ys
R IN
G IN
B IN
Ys
VP OUT
HD OUT
H-DUTY
C508 16V10μ
C526 47
C525 47
C524 47
C203 M0.1
C514 M0.1
C515 M0.1
R203
C204 50V1μ
C205 50V2.2μ
C513 0.01
C509 16V100μ
C523 1000
C522 1000
D218 1SS133
D221
MTZJ9.1B
R207 100
R208 100
R209 100
CR17 0.1μ
CR12 0.1
CR13 0.1
CR14 0.1
RR48 OPEN
GR47 JP
TAIOU
AFC
WPD
H-OUT
V.P
V.OUT
D215 1SS133
D219 1SS133
D220 1SS133
C207 39P
C209 39P
C511 0.01
C206 16V10μ
D216 1SS133
C208 39P
R204 100K
D217 1SS133
C510 16V100μ
C213 M0.33
R216 10K
ABL
D201 1SS133
C212 16V10μ
GND
B-Y
R-Y
Q502 2SC1740S,Q or 2SC1815Y or 2SC1685-Q,TH
9.0
2.4
R505 1K
L502 PL-47
L503 PL-47
+9V-1
R205 100
Q201 2SC1740S,Q or 2SC1685-Q,TH or 2SC1815Y
9.0
3.6
2.9
R206 1K
GJ22 OPEN
+5V-2
V-STUP
BLK
HD
HD
C.Sync
GND
+40V
GJ21 OPEN
+9V-2
+9V-3
GJ20 SHORT
+9V-3
FSC/GND
OSD.R.G.B.Ys
TEXT.R.G.B.Ys
L220
TEM20


Q430
2SD1944H
or 2SC3852
R432
1FR56
G501
TAIOU
D431
1SS133
R825
15K
C432
TAIOU
D430
TZJ5.1C
CC23
0.1
D432
TZJ5.1C
HD
HD
C.Sync
TEXT.Sync
GND
+40V
L220
TEM2030AY
VM
GND
GND

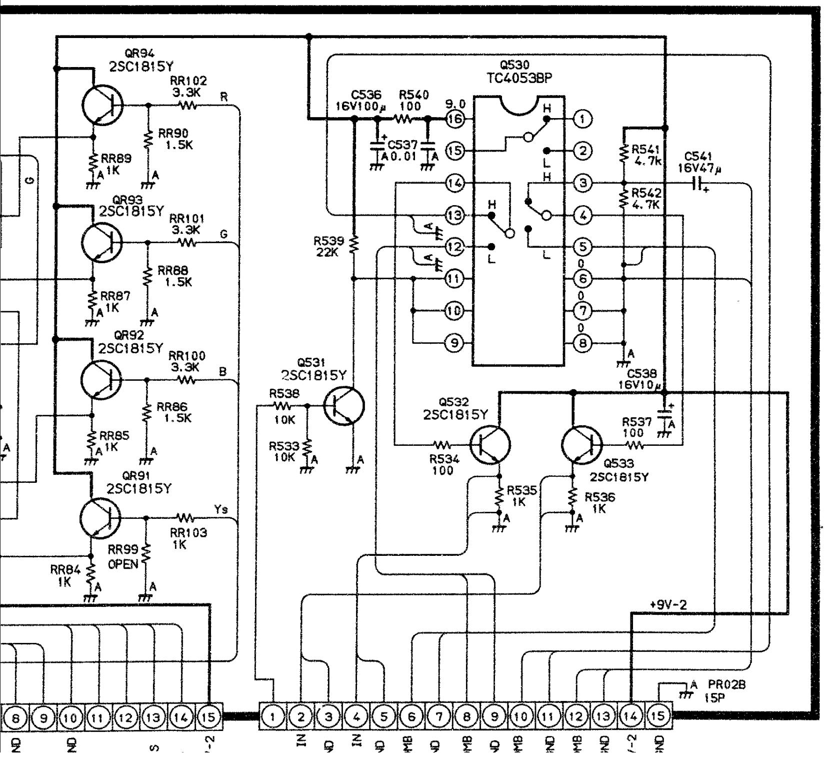
50N9UXC 43N9UXC 61N9UXC	OTHER MODEL
PB9086D-2	PB9086-2

M012Z SELECT UNIT PB908


N0-1199
QR94
2SC1815Y
RR102
3.3K
RR90
1.5K
RR89
1K
QR90
TC4053BP
RR82
100
CR90
0.01
5.0
QR93
2SC1815Y
RR101
3.3K
RR88
1.5K
RR87
1K
QR92
2SC1815Y
RR100
3.3K
RR86
1.5K
RR85
1K
QR91
2SC1815Y
RR103
1K
RR99
OPEN
RR84
1K
DR90
1SS133
Ys
+5V-2
TEXT,R,G,B,Ys
I2C
YS
GND
B
GND
G
GND
R
TO CONV/POW1 P015
P015A
2.5mP8P
PR01B
15P
I2C
GND
GND
GND
GND
R
B
GND
G
GND
R
B
YS
G
+5V-2
C536
16V100μ
R540
100
9.0
C537
0.01
R539
22K
Q531
2SC1815Y
R538
10K
R533
10K
Q532
2SC1815Y
R534
100
Y IN
GND
C IN
GND
COMB
GND
COMB
GND

OTHER MODEL
PB9086-2

ELECT UNIT PB9086-2


QR94
2SC1815Y
RR102
3.3K
R
RR90
1.5K
RR89
1K
QR93
2SC1815Y
RR101
3.3K
G
RR88
1.5K
RR87
1K
QR92
2SC1815Y
RR100
3.3K
B
RR86
1.5K
RR85
1K
QR91
2SC1815Y
Ys
RR103
1K
RR99
OPEN
RR84
1K
Q530
TC4053BP
C536
16V100μ
R540
100
9.0
C537
0.01
R539
22K
R541
4.7K
R542
4.7K
C541
16V47μ
C538
16V10μ
Q531
2SC1815Y
R538
10K
R533
10K
Q532
2SC1815Y
R534
100
R535
1K
Q533
2SC1815Y
R536
1K
R537
100
+9V-2
PR02B
15P
H
L
A

D

E

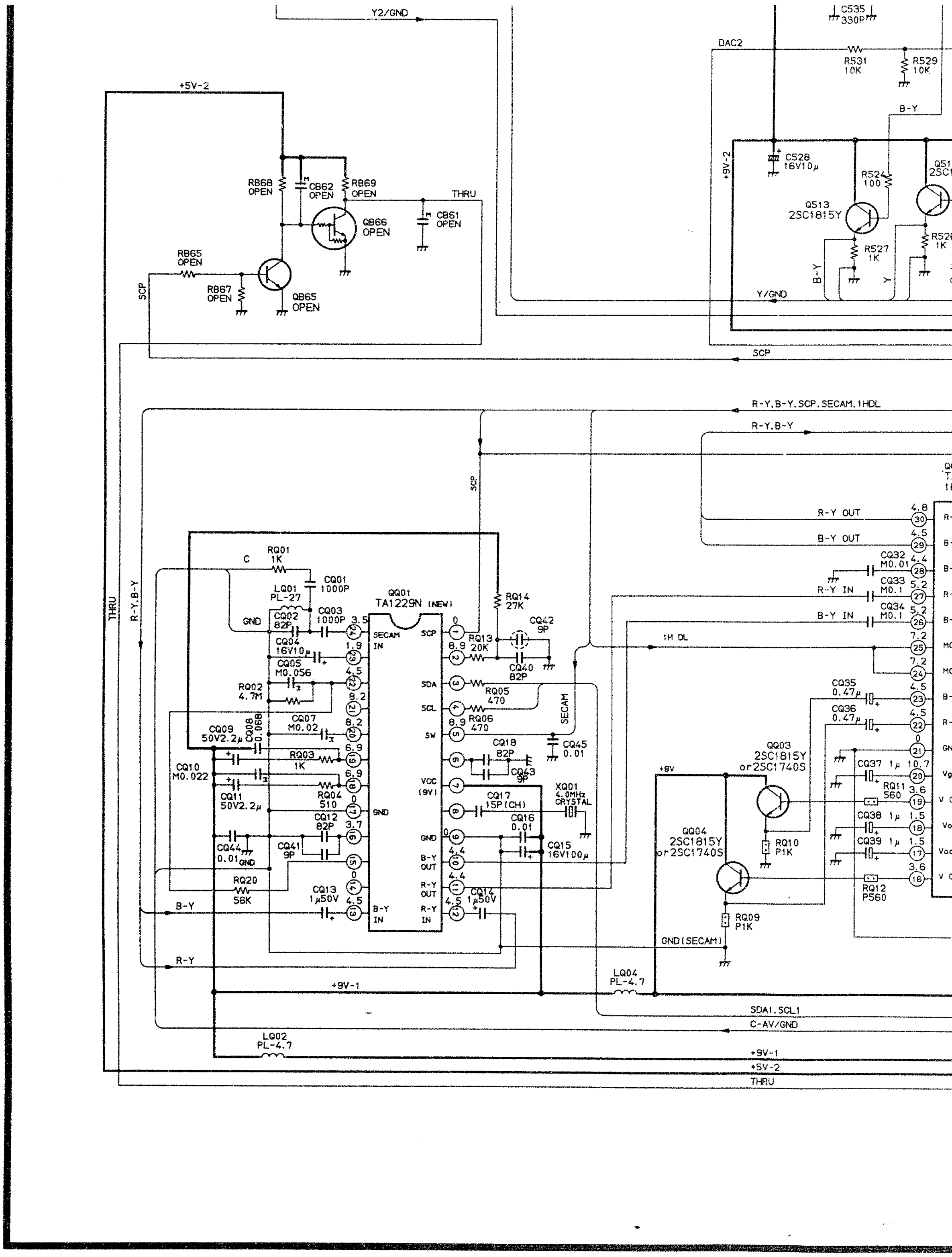
F

G

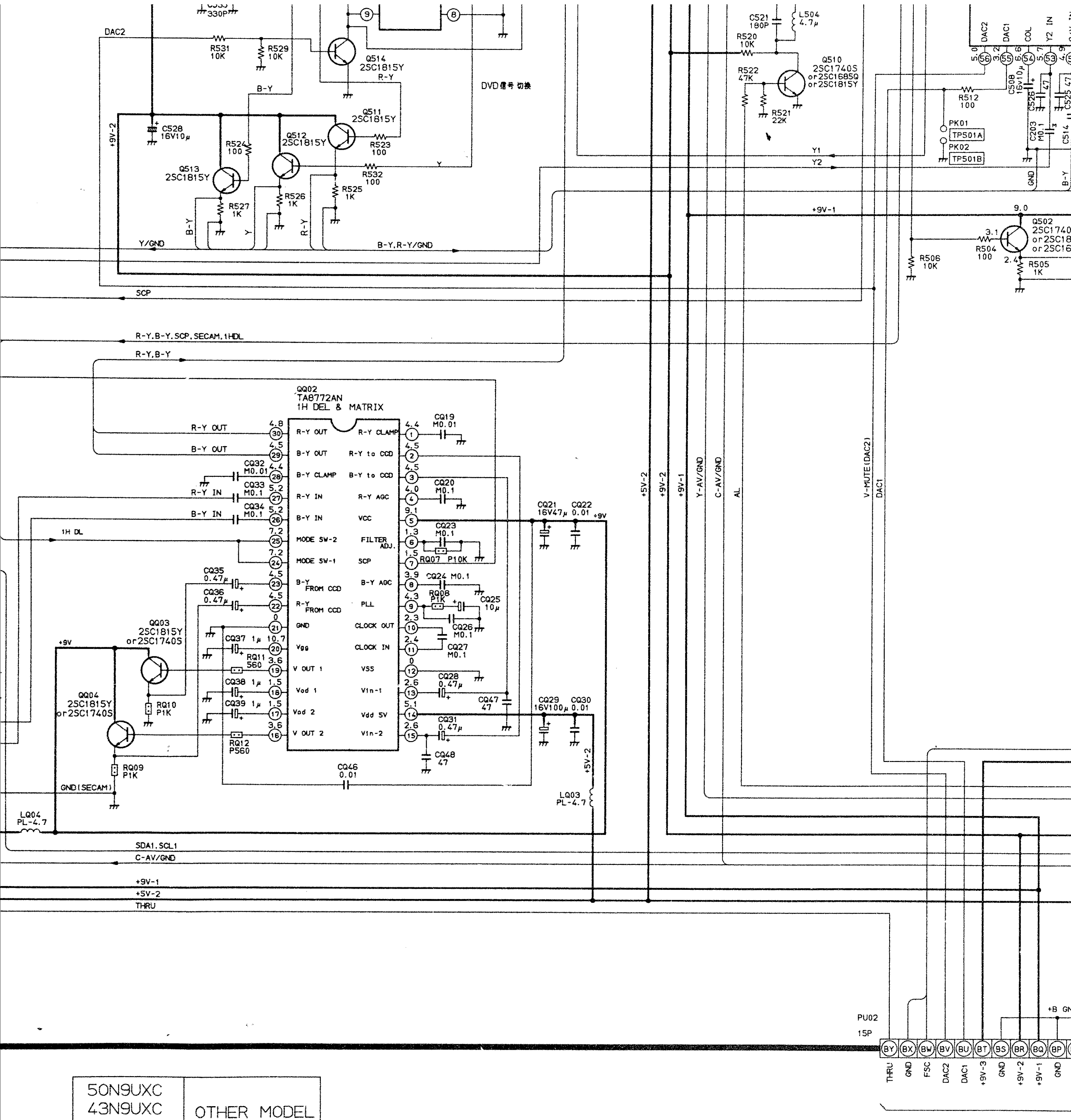
H

I

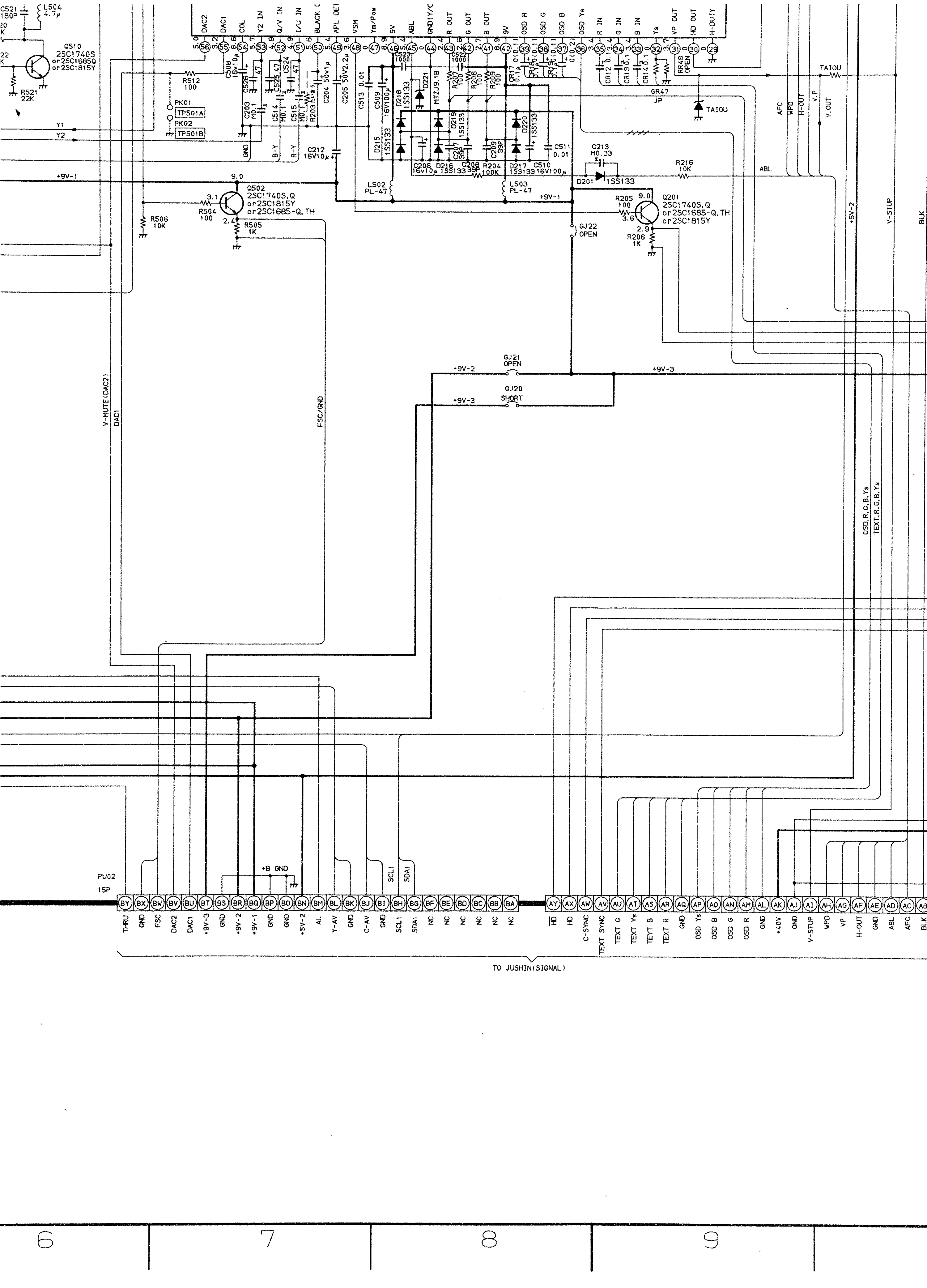
J


Y2/GND
C535
330P
DAC2
R531
10K
R529
10K
B-Y
+5V-2
C528
16V10μ
+9V-2
R524
100
Q513
2SC1815Y
R527
1K
R526
1K
Y/GND
RB68
OPEN
CB62
OPEN
RB69
OPEN
THRU
CB61
OPEN
QB66
OPEN
RB65
OPEN
SCP
RB67
OPEN
QB65
OPEN
SCP
R-Y,B-Y,SCP,SECAM,1HDL
R-Y,B-Y
R-Y OUT
B-Y OUT
CQ32
M0.01
CQ33
M0.1
R-Y IN
CQ34
M0.1
B-Y IN
1H DL
CQ35
0.47μ
CQ36
0.47μ
QQ03
2SC1815Y
or2SC1740S
+9V
QQ04
2SC1815Y
or2SC1740S
RQ10
P1K
RQ09
P1K
CQ37 1μ
RQ11
560
CQ38 1μ
CQ39 1μ
RQ12
P560
GND(SECAM)
RQ01
1K
C
CQ01
1000P
LQ01
PL-27
GND
CQ02
82P
CQ03
1000P
CQ04
16V10μ
CQ05
M0.056
RQ02
4.7M
CQ07
M0.02
CQ08
0.068
CQ09
50V2.2μ
CQ10
M0.022
RQ03
1K
CQ11
50V2.2μ
RQ04
510
CQ12
82P
CQ44
0.01
CQ41
9P
RQ20
56K
CQ13
1μ50V
QQ01
TA1229N (NEW)
SECAM IN
SCP
SDA
SCL
SW
VCC (9V)
GND
B-Y OUT
R-Y OUT
B-Y IN
R-Y IN
RQ14
27K
CQ42
9P
RQ13
20K
CQ40
82P
RQ05
470
RQ06
470
SECAM
CQ18
82P
CQ43
9P
CQ45
0.01
CQ17
15P(CH)
XQ01
4.0MHz
CRYSTAL
CQ16
0.01
CQ15
16V100μ
CQ14
1μ50V
THRU
R-Y,B-Y
B-Y
R-Y
+9V-1
LQ04
PL-4.7
SDA1,SCL1
C-AV/GND
LQ02
PL-4.7
+9V-1
+5V-2
THRU
G
H
I
J
K
L
1
2
3
4

50N9UXC 43N9UXC 61N9UXC	OTHER MODE
PB9087D	PB9087


DAC2
R531 10K
R529 10K
330P
Q514 2SC1815Y
R-Y
B-Y
DVD信号切換
Q511 2SC1815Y
Q512 2SC1815Y
Q513 2SC1815Y
C528 16V10μ
+9V-2
R524 100
R523 100
R532 100
R525 1K
R526 1K
R527 1K
Y
Y/GND
B-Y,R-Y/GND
SCP
R-Y,B-Y,SCP,SECAM,1HDL
R-Y,B-Y
C521 180P
L504 4.7μ
R520 10K
R522 47K
Q510 2SC1740S or2SC1685Q or2SC1815Y
R521 22K
Y1
Y2
+9V-1
R512 100
PK01
TP501A
PK02
TP501B
C508 16V10μ
C526
C203 M0.1
C514
C525 47
DAC2
DAC1
COL
Y2 IN
GND
B-Y
9.0
Q502 2SC1740 or2SC18 or2SC16
R504 100
R506 10K
R505 1K
3.1
2.4
QQ02 TA8772AN 1H DEL & MATRIX
R-Y OUT
B-Y OUT
B-Y CLAMP
R-Y IN
B-Y IN
MODE SW-2
MODE SW-1
B-Y FROM CCD
R-Y FROM CCD
GND
Vgg
V OUT 1
Vod 1
Vod 2
V OUT 2
R-Y CLAMP
R-Y to CCD
B-Y to CCD
R-Y AGC
VCC
FILTER ADJ.
SCP
B-Y AGC
PLL
CLOCK OUT
CLOCK IN
VSS
Vin-1
Vdd 5V
Vin-2
CQ19 M0.01
CQ20 M0.1
CQ21 16V47μ
CQ22 0.01
CQ23 M0.1
RQ07 P10K
CQ24 M0.1
RQ08 P1K
CQ25 10μ
CQ26 M0.1
CQ27 M0.1
CQ28 0.47μ
CQ47 47
CQ29 16V100μ
CQ30 0.01
CQ31 0.47μ
CQ48 47
CQ46 0.01
CQ32 M0.01
CQ33 M0.1
CQ34 M0.1
CQ35 0.47μ
CQ36 0.47μ
CQ37 1μ
RQ11 560
CQ38 1μ
CQ39 1μ
RQ12 P560
1H DL
QQ03 2SC1815Y or2SC1740S
QQ04 2SC1815Y or2SC1740S
RQ10 P1K
RQ09 P1K
GND(SECAM)
+9V
LQ04 PL-4.7
LQ03 PL-4.7
+5V-2
SDA1,SCL1
C-AV/GND
+9V-1
+5V-2
THRU
+5V-2
+9V-2
+9V-1
Y-AV/GND
C-AV/GND
AL
V-MUTE(DAC2)
DAC1
PU02
15P
BY BX BW BV BU BT BS BR BQ BP
THRU GND FSC DAC2 DAC1 +9V-3 GND +9V-2 +9V-1 GND
+B GN

50N9UXC 43N9UXC 61N9UXC	OTHER MODEL
PB9087D	PB9087

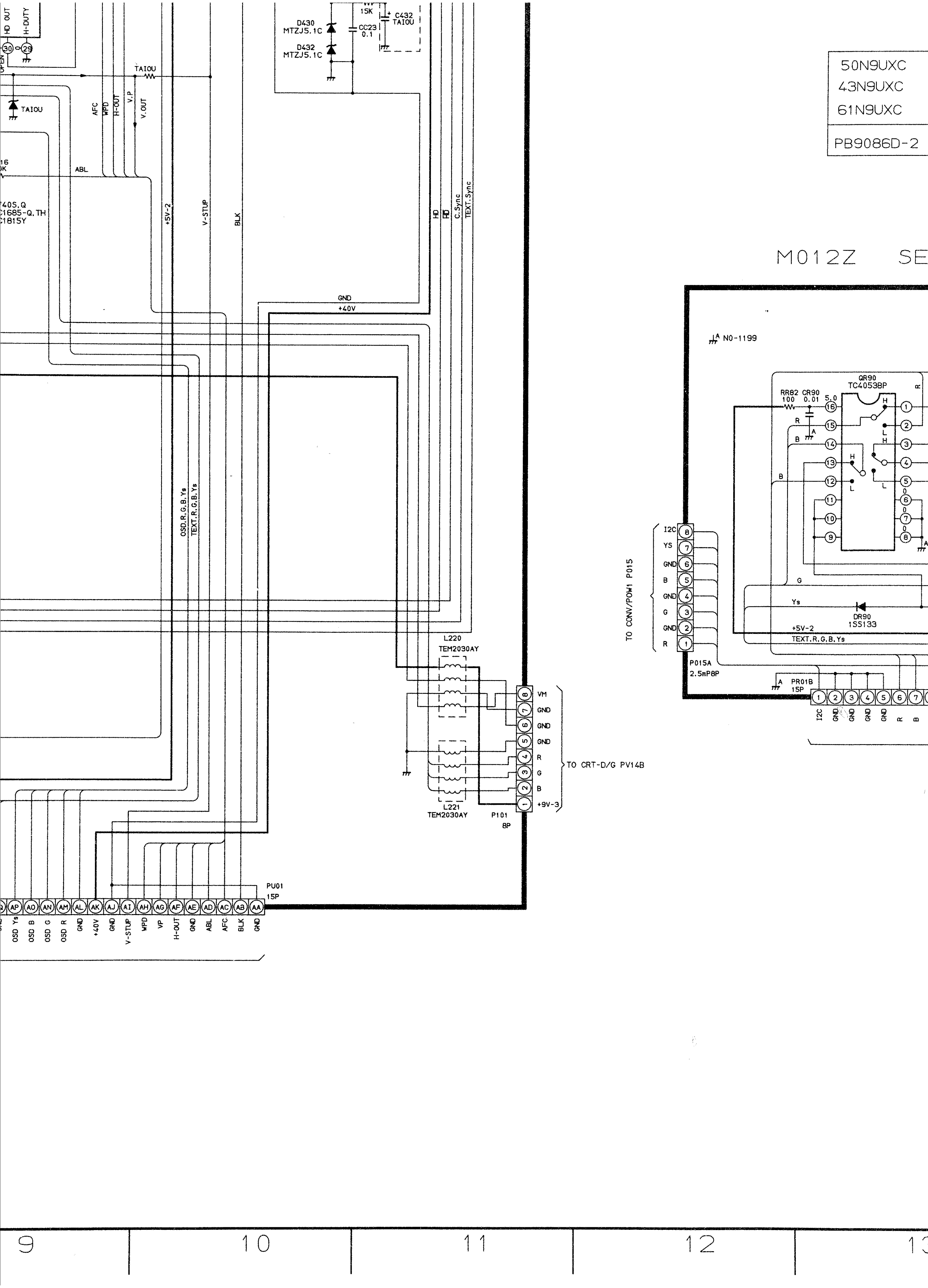


C521 180P
L504 4.7μ
Q510 2SC1740S or2SC1685Q or2SC1815Y
R521 22K
R512 100
PK01 TP501A
PK02 TP501B
Y1
Y2
+9V-1
Q502 2SC1740S.Q or2SC1815Y or2SC1685-Q.TH
R504 100
R505 1K
R506 10K
DAC2
DAC1
COL
Y2 IN
Q/V IN
I/U IN
BLACK D
APL DET
VSM
Ym/Pow
9V
ABL
GND(Y/C
R OUT
G OUT
B OUT
OSD R
OSD G
OSD B
OSD Ys
R IN
G IN
B IN
Ys
VP OUT
HD OUT
H-DUTY
C508 16V10μ
C526
C203 M0.1
C514 M0.1
C525 47
C524 47
C515 M0.1
R203
C204 50V1μ
C205 50V2.2μ
C212 16V10μ
C513 0.01
C509 16V100μ
C523 1000
C522 1000
D218 1SS133
D215 1SS133
D221 MTZJ9.1B
D219 1SS133
D220 1SS133
D216 1SS133
D217 1SS133
C206 16V10μ
C207 39P
C208 39P
C209 39P
C210
C510 16V100μ
C511 0.01
R207 100
R208 100
R209 100
R204 100K
CR17 0.1μ
CR18
CR19
CR12
CR13
CR14
RR48 OPEN
GR47 JP
TAIOU
L502 PL-47
L503 PL-47
C213 M0.33
D201 1SS133
R216 10K
ABL
Q201 2SC1740S.Q or2SC1685-Q.TH or2SC1815Y
R205 100
R206 1K
GJ22 OPEN
GJ21 OPEN
GJ20 SHORT
+9V-2
+9V-3
AFC
WPD
H-OUT
V.P
V.OUT
+5V-2
V-STUP
BLK
V-MUTE(DAC2)
DAC1
FSC/GND
B-Y
R-Y
GND
OSD.R.G.B.Ys
TEXT.R.G.B.Ys
PU02
15P
+B GND
SCL1
SDA1
BY THRU
BX GND
BW FSC
BV DAC2
BU DAC1
BT +9V-3
BS GND
BR +9V-2
BQ +9V-1
BP GND
BO GND
BN +5V-2
BM AL
BL Y-AV
BK GND
BJ C-AV
BI GND
BH SCL1
BG SDA1
BF NC
BE NC
BD NC
BC NC
BB NC
BA NC
AY HD
AX HD
AW C-SYNC
AV TEXT SYNC
AU TEXT G
AT TEXT Ys
AS TEYT B
AR TEXT R
AQ GND
AP OSD Ys
AO OSD B
AN OSD G
AM OSD R
AL GND
AK +40V
AJ GND
AI V-STUP
AH WPD
AG VP
AF H-OUT
AE GND
AD ABL
AC AFC
AB BLK
TO JUSHIN(SIGNAL)
6
7
8
9

50N9UXC
43N9UXC
61N9UXC

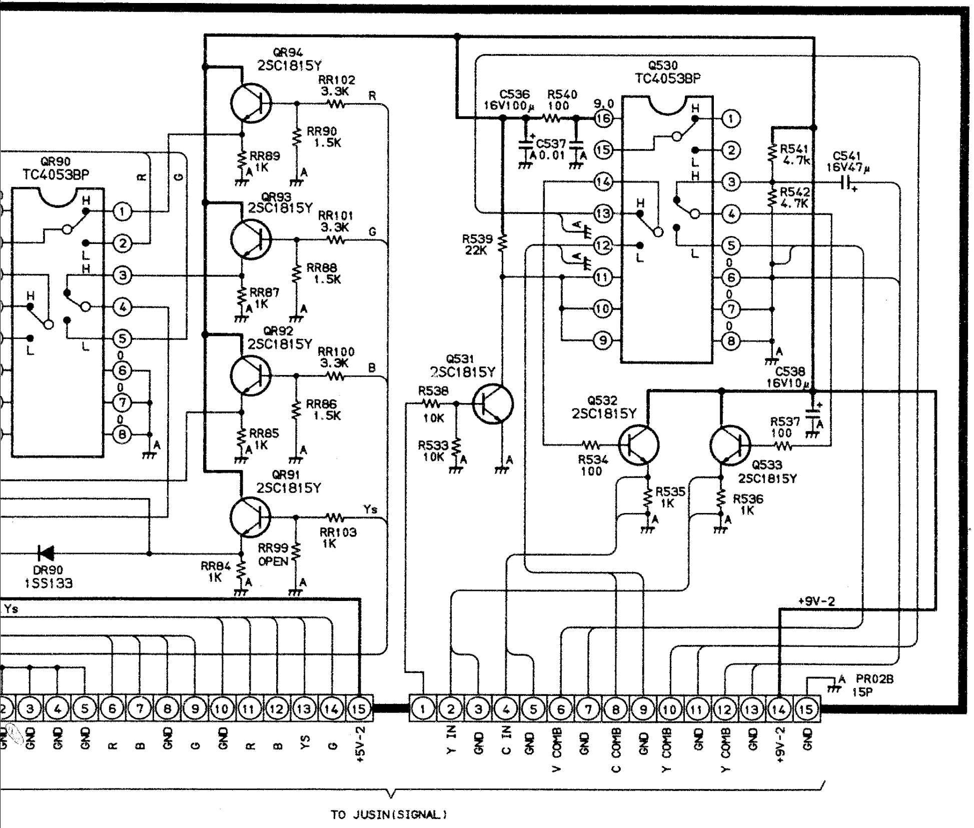
PB9086D-2

M012Z SE


D430
MTZJ5.1C
D432
MTZJ5.1C
15K
CC23
0.1
C432
TAIOU
HD OUT
H-DUTY
TAIOU
AFC
WPD
H-OUT
V.P
V.OUT
ABL
+5V-2
V-STUP
BLK
HD
C.Sync
TEXT.Sync
GND
+40V
OSD,R,G,B,Ys
TEXT,R,G,B,Ys
L220
TEM2030AY
L221
TEM2030AY
P101
8P
VM
GND
GND
GND
R
G
B
+9V-3
TO CRT-D/G PV14B
PU01
15P
OSD Ys
OSD B
OSD G
OSD R
GND
+40V
GND
V-STUP
WPD
VP
H-OUT
GND
ABL
AFC
BLK
GND
N0-1199
QR90
TC4053BP
RR82
100
CR90
0.01
5.0
I2C
YS
GND
B
GND
G
GND
R
TO CONV/POW1 P015
P015A
2.5mP8P
PR01B
15P
Ys
DR90
1SS133
+5V-2
TEXT,R,G,B,Ys
I2C
GND
GND
GND
GND
R
B
9
10
11
12

50N9UXC 43N9UXC 61N9UXC	OTHER MODEL
PB9086D-2	PB9086-2

Z SELECT UNIT PB9086-2


QR94
2SC1815Y
RR102 3.3K
R
RR90 1.5K
RR89 1K
QR90
TC4053BP
QR93
2SC1815Y
RR101 3.3K
G
RR88 1.5K
RR87 1K
QR92
2SC1815Y
RR100 3.3K
B
RR86 1.5K
RR85 1K
QR91
2SC1815Y
Ys
RR103 1K
RR99 OPEN
RR84 1K
DR90
1SS133
Q530
TC4053BP
C536 16V100μ
R540 100
9.0
C537 0.01
R539 22K
R541 4.7k
R542 4.7K
C541 16V47μ
C538 16V10μ
Q531
2SC1815Y
R538 10K
R533 10K
Q532
2SC1815Y
R534 100
R535 1K
Q533
2SC1815Y
R536 1K
R537 100
+9V-2
PR02B 15P
GND
R
B
G
YS
+5V-2
Y IN
C IN
V COMB
C COMB
Y COMB
+9V-2
TO JUSIN(SIGNAL)